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SOME STATISTICS AND PARTIAL HISTORY OF THE INSANE IN VIRGINIA.[1]

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It has seemed to me that it would be exceedingly appropriate at this time, when this capital city of the Old Dominion is being honored by this meeting together here of distinguished alienists from all parts of our country and from other lands, if we could present a complete history or review of the insane in Virginia from her colonial period down to the present time. It is a source of regret that the time at my disposal and the available data at hand are entirely insufficient for the undertaking of such a task. I can only hope at this time to give, as indicated in the title, "Some Statistics and Partial History of the Insane in Virginia," and leave it to others to perfect and complete the same.

The ravages of two wars (the War of the Revolution and the war between the States) have sadly marred and scarred the bosom of this old "Mother of States and Statesmen," and destroyed many valuable statistics and records in this and other departments of State history which can never be replaced.

We, as Virginians, claim as a matter of State pride the honor of having built the first hospital exclusively for the insane on this continent. In Colonial days, the House of Burgesses incorporated "The Hospital for the reception of idiots, lunatics,

[1] Read before American Medico-Psychological Association, May 23, 1900.

and persons of insane or disordered mind," which was opened for the reception of patients September 14, 1773.

This hospital is perpetuated to-day as the Eastern State Hospital, at the old Colonial Capital, Williamsburg, Va. We would at the same time accord to our sister Commonwealth of Pennsylvania every mead of praise for original and prior efforts in providing wards for the insane in a general hospital in 1752, and also to our sister Commonwealth of Maryland for like efforts in this direction inaugurated in 1774 and carried into effect in 1797 in the establishment of the Maryland Hospital. It may be said, too, on the word of Governor Gilbert C. Walker, in his centennial address at Williamsburg in 1873, that "Virginia in her deep poverty, in the days of reconstruction, established the first asylum for the poor colored man ever organized," established first at Richmond, Va., as "Howard's Grove Hospital" and in 1885 permanently established as the Central State Hospital, near Petersburg, Va., where to-day nearly one thousand colored insane are cared for in magnificent buildings, splendidly equipped, under the able and skillful management of Dr. Wm. F. Drewry, in a manner that reflects great credit upon this old Commonwealth and upon this age.

I have endeavored to prepare the following statistical table showing the number of insane in the State Hospitals at the end of each census decade (as far as obtainable) from the opening of the hospital, in 1773 at Williamsburg, down to the present time and also the population of the State (white and colored) for each census, with the percentage of increase, comparatively, of the insane and the population.

The statistics have been compiled at considerable labor, owing, as before said, to the destruction and loss of many valuable records.

I have been unable to fill out the earlier census statistics of the Eastern Hospital, though I have had much correspondence and research, aided by the superintendents of the other State Hospitals and others, to whom I wish to render thanks and acknowledgments.

In these statistics only the insane in the State Hospitals are considered, but it is probable that the number of insane outside the hospitals has varied but little each year; as many perhaps are unprovided for to-day in the State as at any previous time.

INSANE POPULATION IN VIRGINIA STATE HOSPITALS (OR ASYLUMS).

Date.	Eastern Hospital.	Western Hospital.	Southwestern Hospital.	Central Hospital.	Percentage incurable colored insane.	Total insane.	Percentage of increase.	Total white insane.	Percentage of increase.	Total population.	Percentage of increase.	White population.	Percentage of increase.	Numbers of white insane to population.	Colored population.	Percentage of increase.	Numbers of colored insane to population.
Sep. 30,	*a*																
1780.....										747,610	17.6	442,117			305,493		
1790.....										747,610	17.6	442,117			305,493		
1800.....	20									880,200	17.6	514,280	10.6		365,920	13.2	
1810.....	35									974,600	10.6	551,514	7.2			15.6	
1820.....	43									1,065,116	9.8	603,085	9.3		423,086	9.6	
1830. ...	58	*b* 16*								1,211,405	15.8	694,300	15.3		462,031	12.0	
1840.....	78	100								1,239,797	2.3	740,968	6.7		517,105		
1850.....	193	275								1,421,661	14.6	894,800	20.9		498,829	5.8	
1860.....		379		*d*						1,596,318	12.4	1,047,299	17.5	$\frac{1}{1810}$	526,861	4.3	1 to 8,000+†
1870.....	200	335		147		682		535		1,225,163	4.4	712,089		$\frac{1}{1311}$	549,019		1 to 3,500
1880.....	330	479	*c*	326	122	1,135	66.4	809	51	1,512,565	23.5	880,858	23.7	$\frac{1}{1089}$	513,074	23.0	1 to 1,937
1890.....	402	604	248	578	77½	1,832	61 4	1,254	55	1,655,980	9.5	1,020,122	15.7	$\frac{1}{813}$	631,707	6.7	1 to 1,100
1899.....	564	940	386	852	49	2,742	49	1,890	50						635,858		

a.—Eastern State Hospital, incorporated 1769, opened September 14, 1773. *b*.—Western State Hospital, incorporated 1825, opened—1828. *c*.—Southwestern State Hospital, incorporated November 29, 1884, opened May 17, 1887. *d*.—Central State Hospital, incorporated ——, opened December 17, 1869, as "Howard's Grove Hospital," Richmond, Va.

*In 1830 there were about 16 patients in Western Hospital.

†As far as I can ascertain there were in 1860, 50 or 60 insane colored in the Eastern State Hospital, or probably less. This would be 1 to 8,000 or 10,000 population.

The first two insane patients were admitted into the Eastern Hospital October 12th, 1773, by the Court of Directors, who met once a week for this purpose.

From this table it will be seen that in the early decades of this century, up to 1860 (the war between the States) the white population had increased a little over 100 per cent, while the colored population had increased about 50 per cent.

At this time there were about 500 white insane in hospitals, and possibly not over 50 or 60 colored insane. In other words, there were in 1860 (prior to the said war) one white insane person to 1,810 white population, and one insane colored to about 6,000 or 8,000 colored population.

During the war the old Commonwealth of Virginia was unfortunately dismembered and the State of West Virginia was separated from the old Mother State (I would fondly hope to see the day when the old landmarks were restored and the original boundaries re-established, but I fear hoping would be in vain).

This cut off from Virginia nearly one-third of her population, and the percentage of increase in total population in this decade, counting both States, was much less—only about 4.4.

At the end of the seventh decade (1870) we find one insane white to 1,331 of white population, and one colored insane to 3,500 of colored population.

During the eighth decade (1880) we find that the population (white and colored) had increased at about the same ratio, 23 per cent while the white insane had increased 51 per cent and the colored insane 122 per cent. At this time there was one insane white to 1,089 of white population, and one colored insane to 1,937 of colored population.

During the ninth decade, or in 1890, we find that the white population had increased 15.7 per cent, while the colored population had increased only 6.7 per cent, and that the white insane had increased 55 per cent and the colored insane about 77 per cent; in other words, in 1890 there was one white insane to 813 of white population, and one colored insane to 1,100 of colored population.

We regret that we cannot as yet have the full returns of the tenth census, but up to 1899 increase in the white and colored insane in the hospitals has been in about the same ratio—about 50 per cent.

These statistics show for the last decades of this century, since the Civil War, a remarkably increased ratio of insanity over and above the increase of populations, both in the white and colored races, much more marked among the colored.

This may be accounted for in part by the greater freedom of access to the State Hospitals, the improved methods of management, and gradual popularizing, so to speak, of these institutions; but other causes have contributed to this in much greater degree.

While we cannot attempt to give at this time a detailed history of the management of the insane, and of the many noble men who have devoted their lives to this specialty in this State (this has been done to a large extent by our distinguished ex-president, Dr. T. O. Powell, in his address before the association in 1897 in Baltimore, Md.) it may be of interest to give the names of those who have been in charge of these State institutions from their establishment up to the present time.

The Eastern State Hospital, from its opening in 1773, was in charge of keepers up to 1841, and visiting physicians only attended the patient when sent for by said keepers. The keepers were James Galt, 1773 to 1801, succeeded by his son, William F. Galt, 1801 to 1826; Jessie Cole, for a few months; Dickie Galt, 1826-1837; Henry Edloe, a few months; then Philip Barziza, 1837-1841, when he was elected steward.

The visiting physicians were Dr. Jno. Siqueyra, 1773-1795; Dr. John Galt and Dr. Barraud, 1795-1808; Dr. Alex. D. Galt, Jr., aged twenty-two, was made superintendent and held office until 1862. Thus the Galts—father, son, and grandson—all eminent physicians and philanthropists, were associated with the hospital from its foundation, in 1773, up to the Civil War, in 1862. During the war, the Federal authorities took charge and Dr. Wager, of the Fifth Pennsylvania, was superintendent until the end of the war. Then Dr. Henly, Dr. Garrett and Dr. Petticolas were successively superintendents for short periods, succeeded by Dr. Brower, 1867 to 1875; Dr. Harvey Black, 1875 to 1882; Dr. Wise, 1882 to 1884; Dr. Moncure, 1884 to 1898; Dr. L. S. Foster, 1898 to present time.

It is worthy of note that the first institution on this continent was incorporated and established as a hospital.

The Western State Hospital for the first eight years of its existence, 1828 to 1836, seems to have been under the charge of a physician, Dr. Boys, 1836; Dr. Francis F. Stribling, aged twenty-two, was made visiting physician; Samuel Woodward was keeper, and his wife matron. Dr. Stribling was afterwards made superintendent—probably the first medical superintendent—and had charge of the hospital until 1874; Dr. Robert T. Baldwin was superintendent from 1874 to 1879; Dr. A. M. Fauntleroy, 1880 (January) to 1882; Dr. R. S. Hamilton, 1882-1884; Dr. A. M. Fauntleroy, 1884-1886; Dr. Daniel B. Conrad, 1886 to 22d April, 1889, when Benj. Blackford, the present worthy superintendent, was elected.

The Central State Hospital was under charge of Dr. J. J. De Lamater from its organization, 1869 (as Howard's Grove Hospital) till June, 1870. Dr. Daniel B. Conrad, superintendent from July, 1870, to September, 1873; Dr. Randolph Barksdale, superintendent from September, 1873, to March, 1882; Dr. David F. May was superintendent under the Readjuster State Government from March, 1882, to April 15, 1884, when Dr. Randolph Barksdale was reinstated as superintendent, and held office till October, 1896. Dr. Wm. F. Drewry, superintendent, 1896 to present time.

In the Southwestern State Hospital Dr. Harvey Black was superintendent from March, 1887, until his death, October, 1888. He had previously served on the committee appointed by the Legislature for the selection of a site for this hospital, and had also been chairman of the Building Committee. Dr. Ro. J. Preston, Superintendent from November 18, 1888, to present time.

Many of these who devoted their lives to this specialty have gone to their reward, and time and space would fail me, even if I could do justice to their memory. When we compare the decades at the beginning and prior to the present century, when the characteristics of asylums in many places throughout the world, in the language of another, were "chains, darkness and stripes, hideous cries and fool orders," with the present decade, "when so many of the appliances of health, comfort and pleasure characterize these institutions with their spacious mansions and handsome grounds, with well-ventilated, lighted and heated apartments, with pure air throughout the premises, and wholesome

food in abundant quantity, with the regular hours for recreation, food and rest, with the needful but mild restraint; where added to these the stately trees, the smiling flowers, the splashing fountains, the shining grass adorn the scene, arrest the eye, and distract attention from the dismal present, and awaken hope; where the reading-room, with its voice from the outer world arouses sympathy with the animating pursuits of men and stirs the love of pleasure and ambition; where music, too, the earliest remedial agent of insanity, with its voice of harmony exorcises the demon of madness, and last, but not least, among these curative agencies, where the place of divine worship allures to a brighter world, where sorrows cease." When we consider these things which science and humanity and Christianity have brought about, we can but wonder at the change.

"While Franklin spoke for humane treatment, in 1750, and Pinel broke the chains from the insane in Paris in 1792, and Tuke advocated non-restraint in England in the same year, and Rush, of Philadelphia, showed that insanity was not a curse but a disease and required buildings specially devised for its care, with skilled physicians in charge," the Galts and Stribling and others in Virginia raised their voices in behalf of the gentle treatment and abolition of harsh and cruel methods of restraint. These noble physicians and humanitarians were in advance of their age, and while they could not educate public sentiment up to this high standard in their day, they all did noble work for the cause of humanity and the cause of God, and have impressed their names and their influence indelibly upon psychiatry. We would not in this partial history ignore or pass over the efforts and marvellous work of that noble woman, Miss Dorothea L. Dix, whose wonderful influence in ameliorating the condition of the insane was felt in Virginia and all over the South in bringing about these marvellous changes.

While all the State hospitals are to-day endeavoring to keep up these improved methods in the care and treatment of the insane, yet straitened finances, necessitating lowered per capitas, have of late years restricted efforts along many of these lines of treatment. Many of the means and facilities for investigation and research into neuro- and psycho-pathology, enjoyed by many States, have as yet been unimproved in this State, or at least to a very limited extent.

SOME THOUGHTS RELATIVE TO THE ETIOLOGY OF DEGENERATION.

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A few years ago, when it was popular for every one to write about degeneration, and when it was the fashion to discover evidence of degeneration in every abnormality which a man possessed, it was generally supposed that such unstables would naturally flock to the army and that splendid opportunities must there exist for the study of the stigmata of this interesting condition. Such a study was at first to a large extent forced upon the writer as the result of a peculiar combination of circumstances, and has since been continued by him in his spare moments. At first the investigation was surrounded with peculiar difficulties, for nowhere, except in special journals, could one find a description of what a degenerate really was. The average ideas were so vague and so tinctured with phrenology and metaphysics as to be of no use to a beginner. The popularity of the Lombroso School of Criminal Anthropology gave rise to the impression that every criminal must be a degenerate. When it was discovered that some criminals—particularly criminals from passion and those whose youth had been passed in bad surroundings—were physically normal and that, on the other hand, degenerates were found among the most moral of men, it became evident that the actions of any given individual were not entirely the result of an abnormal development, but were in part due to his environment. When it was attempted to class every criminal among the degenerates, it followed that undue prominence was given to abnormalities not infrequently found in normal men. In like manner confusion followed from considering the insane as degenerates, whereas not seventy-five per cent of them belong to this class. It was extremely difficult,

then, to determine with precision what were the stigmata of degeneration. The deeper one goes into the subject, the more and more does the study lead us into the science of anthropology, and becomes more and more foreign to a physician's ordinary lines of thought. Again, the further one investigates, the more is he convinced that variations from the average may be strictly normal in one man and an evidence of extremely unstable development in another. Thus degeneration is discovered to be a highly complex condition resulting from an endless succession of causes acting upon the ovum from the moment of conception, or upon the parents or their ancestors so as to modify the germ cells long before their union. Degeneration is a process so interwoven with evolution and development, that to understand it one is led into all sorts of by-paths of study in embryology and its branches of teratology, in heredity and the diseases connected with it, in anthropology—the origin and disappearance of races and the characters of the present ethnic types—in evolution and man's descent, and a host of side issues following from a comprehension of the laws of the origin of species. Thus it would be easy to find oneself engaged in what would appear to be an almost hopelessly involved and interminable investigation. Unless one succeeds in getting a clear general idea of degeneration but investigates only one side, he is apt to make statements which some other writer will flatly contradict or which he himself will later retract. Lombroso himself has had to change his opinions so radically on certain topics that he now occupies a position opposite to that at first held by him.

Much of the contempt thrown upon this subject would have been avoided, had investigators possessed a simple knowledge of the laws of organic evolution, and a consequent ability to separate in their minds the normal from the abnormal. For instance, there is no normal or average individual in any species; variation is the rule, and it is by taking advantage of these minute normal variations better adapted to the environment than the average, that species are gradually changed by the survival of the fittest. On the other hand, variations cannot be marked because it has been established as the very foundation law of heredity that offspring must closely copy their parents,

and wide variation would involve a loss of adjustment leading to the extinction of that line of individuals in the species. Thus there is no normal or average man; and it is difficult to conceive of a man each of whose characteristics is the exact average of that characteristic in all the individuals in his race. We all vary and no two men are alike. Yet such minute normal variations grade so imperceptibly into the marked abnormal differences due to unstable development that it is absolutely impossible to make a rigid classification. Every definition must be in general terms, and these will not apply to borderland cases any more accurately than in any other biological science.

We can, therefore, define a degenerate as an abnormal man whose variations or stigmata are developmental and due to an unstable nervous system. The variations from the average may also be due to diseases resulting from an unstable nervous system, such as rickets and the deformities of infantile paralyses. So long as we recognize that the essential defect of the degenerate depends upon the faulty composition of the substance of the nerve cell or its ancestor, the germ cell, although the character of the defect may be absolutely unknown, we are justified in using the unscientific term, nervous instability. We are perfectly aware of its indefiniteness, yet until the pathologist shall have taught us all about the composition of the nerve cell in health and disease, we can find no other term which will define a condition which, however, we know to exist.

It is also known that the neurotic condition may appear in every conceivable grade, from the normal to the extreme types encountered in the clinic, and that ill-defined borderland cases must exist. It is, therefore, evident that every grade of degeneration is met with and that it is not scientific to make two classes of men—the degenerate and the normal. The borderland types may be more or less degenerate, somewhat degenerate, slightly degenerate, or may be described by any other terms expressive of degree. A recognition of this fact would have saved the expression of many a bad opinion. Thus a slightly degenerate boy, according to his training and environment, may become a useful citizen or a scoundrel, and the study of such cases gives us no sure information as to the real effect of his abnormality. Such cases, indeed, may be so puzzling that

two investigators may come to directly opposite opinions. The modern training of defectives and the abandoned children of degenerates is accomplishing such wonders as to upset many ideas held only a few years ago. In no other study will one be so astonished at the wide difference between the opinions he first holds and those he gradually forms.

Again, the stigmata of degeneration in marked cases are of so extreme a type that we cannot fail to distinguish them, but the minor stigmata are nothing more nor less than slight exaggerations of normal variations found in all men. These stigmata, being everywhere present, have such an uncertain value that their significance may be great or nothing. In saying that they are present in all men it is not meant that all men are tinctured with degeneration—a ridiculous conclusion at which we should arrive if we gave these stigmata a high diagnostic value. Such a statement would be no more true than the assertion that all men are more or less insane, because every man has normal variations from the average psychical characteristics of his race.

It is very unfortunate that biologists should have appropriated "reversed selection" properly called *involution*, or the retrogression of parts once useful but now useless, as exemplified by the vermiform appendix. This process is a matter of selection and manifests itself in the survival in greater numbers of those individuals in whom the useless parts are least developed by normal variation. It has positively nothing whatever in common with degeneration of family lines due to nervous instability. Involution is a wholesome process leading to survival; degeneration is an unwholesome process leading to extinction. Parasitism is a normal, wholesome involution, and not the degrading process certain religious writers like Drummond would lead us to believe.

What increases this unfortunate confusion of different processes and makes it doubly obscure is the fact that degeneration, by causing arrests of development, may produce anomalies identical with those resulting from involution. For instance, absence or defect of the wisdom teeth may be purely involutional in a normal man, because these teeth are disappearing from the race; yet in a degenerate their absence may be a real stigma indicating an abnormal arrest of development. The former may

be a direct inheritance from normal parents, but the latter may be an abnormally wide variation from normal parents with large wisdom teeth. Such an identity of defects, which may be due to either one of two antagonistic processes, complicates this study almost hopelessly, but differentiation may be possible in accordance with the above law that normal variations do not depart widely from the parental form, while as a rule, the contrary holds for degenerate variations.

Another normal condition, which all writers ignore, is to be found in the wide diversity of normal variation resulting from civilization. According to the laws of evolution, man or his ancestor developed his brain at a time when his surroundings were very severe and only the most intelligent survived. Thus, each generation had more brain than its predecessor, and this progress may have occurred in glacial times. In no other way is it possible for the average intelligence of a race to increase. When the environment softened, and men had more intelligence than was needed merely for survival, the surplus brain power was naturally devoted to other ends, and civilization began with its division of labor. At first one man found that he could chip flints better than someone else, and by bartering these get more meat than he could obtain by hunting. This process has continued to such minute subdivision, that now a workman does but one little thing all his life, and often passes his whole existence in dense ignorance of all subjects outside of his speciality. Every savage had to have considerable intelligence to do all the necessary things in the adverse environment which must have existed in Northern Europe four thousand years ago. At present it is possible for a man to live well who has so little intelligence that he would have perished in a savage life. Hence, as an invariable rule in civilization the increase of the average brain weight by natural selection has stopped; and if we introduce civilization to a race undergoing such evolution in an adverse environment we soften that environment so as to preserve the less intelligent and thus check the further evolution of the brain. The longer a race has been kept in an adverse environment necessitating a brutal struggle for existence, the bigger are the bodies and the brains, as we see in going north in Europe until we meet a climate which is so adverse as to in-

terfere with nutrition. Small-skulled civilized races, like the Peruvians, have without any reasonable doubt met with a mild environment very soon, perhaps many thousands of years ago, and their skull growth was checked at that time. Savage skulls in severe climates are much larger than the average civilized skull, and such races have invariably been able to advance to a civilization far beyond that of the races from whom they borrowed the first steps. This, to our certain knowledge, has been the history of Europe for the last two thousand years. Civilization results from brain; it has never produced an ounce of brain, and all the universities in the world will never balloon out our skulls by a single cubic inch.

Savages, therefore, all being compelled to do the same things, vary extremely little from one another, and their skulls show a wonderful uniformity. When we go back to prehistoric skulls in any one locality, they all seem to have been made from the same mould. Variations could not survive. The environment of civilization makes it possible for greater and greater variations to survive, so that the higher the civilization the more marked are the variations from the average. Thus it happens that variations, which among savages could only occur as a result of disease, are now so perfectly normal that their possessors leave healthy offspring to continue the line. Such normal variations, moreover, may be identically the same as others which result from degeneration, and the separation of them is extremely puzzling. To guide us, however, there remains the old law, that in the normal and stable man, developmental variations cannot be markedly different from similar variations in the parent. In unstable or degenerate development, the offspring is not controlled by normal checks and may wander into any channel and never resemble the parent closely except in rare cases and as a lucky chance. Much has been written about this transformation of heredity in the degenerate, for it is a very common observation that in such families there is a wide diversity of forms among near relations. As an example of the opposite nature, the writer knows a father, son and grandson, having anomalies of minor parts so marked as to be called stigmata by specialists; and yet the three are such laughable images of each other that anything else than normal stable development is

almost impossible, it being highly improbable that unstable creatures should have thrice developed in the natural groove. In like manner there is ground for the belief that some of Lombroso's criminal types represent merely marked normal variations in individuals who are not degenerate but transmit their characteristics stably and accurately from generation to generation; and who, had they been properly educated during development, as is further explained below, might never have come into conflict with the law.

There has never yet been an unchallenged illustration of the transmission to the offspring of an acquired modification due to use, disuse or the general environment. Again, the work of Weismann in proving the impossibility of such transmission, unless it be of such a character as to interfere with the nutrition of the germ cells, has done much to call attention to the fact that nervous instability is not nearly so much a matter of inheritance, as it was once thought to be, but is rather a result of interference with nutrition, poisoning by toxins or alcohol, or of mechanical accidents to the ovum, and is probably to be found in normal families far more often than was once believed. This general condition of nervous exhaustion, nerve starvation, or alteration of the chemical composition of the nerve substance, cannot be called a variation in the sense in which Weismann uses the term. He is dealing with health, we with disease. Yet in the beginning the process must have been derived from normal parents and was not an inheritance but a real modification due to the environment—an acquired characteristic in the strict scientific sense. Again, there is, perhaps, ground for a suspicion that it is not transmitted at all, that degeneration is not hereditary, but that the ova always tend to revert to the normal if they are permitted to do so. Of course we know that environmental modifications may be so severe as to be fatal, a rule applying to men as well as to bacteria; and that modifications, though less severe, may nevertheless prevent the production of viable offspring, or may give rise to offspring not strong enough to have normal children. If the young children of degenerates, not too far from the average, could be properly nourished and raised and then kept healthy, sober and industrious, their offspring might be normal if similarly treated; that is, a real regeneration

may occur. This is the rule with low forms of life, for even after bacteria have been "attenuated" or modified by an adverse environment, their descendants revert at once to the normal type as soon as the proper environment is restored by passage through a susceptible animal. Of course we do not mean by regeneration the restoration of an individual to the normal, for that would be as impossible as changing an imbecile into a genius. Regeneration and degeneration refer to the family lines and not to the individual.

The word regeneration has, by the way, been already appropriated by the biologists who have given a scientific meaning to it, having nothing in common with the term as employed by the anthropologists. The biologist means by regeneration the reproduction of lost parts, such as the growth of a new claw by a lobster after the old one has been lost by accident, the growth of a new eye by a snail or a new tail by a lizard under similar circumstances. In the lowest animals, like polyps or worms, the whole body may be regenerated from a part containing sufficient reproductive power, but the higher the animal the less becomes this power of regeneration, in man being limited to the repair of epithelial structures, severed nerves and like processes.

Unfortunately for degenerates, the rule is for them to do the very things which are the most harmful for themselves and their germ cells and their children. They progressively increase the adversity of the environment, and the condition of malnutrition, nerve-starvation, exhaustion or degeneration, or whatever we may call it, is progressively intensified by more modifications due to the environment, until non-viable offspring or sterility ends the line—nature's way of purifying the race.

The momentous importance of Weismann's theory as applied to the care and raising of the children of degenerates needs no emphasis. The practical results of such nurture are superb. Children of the slums taken early, fed and raised in honest families, as a rule, become normal citizens in spite of terribly degenerate parentage. We read of the results with delighted astonishment. This theory may also do away with that fatalism which condemns degenerates and their offspring as hopelessly incorrigible, and which gives rise to the various absurd proposals for preventing their reproduction. Efforts at regenera-

tion will take the place of nature's brutal methods of ruthless destruction of the least fit, as it is the rule for civilization to preserve and make useful that which was formerly destroyed by nature with reckless prodigality. Unfortunately the adverse environment of an abnormal intrauterine life may be so disastrous that no subsequent care can repair the damage already done, so that degenerates will be encountered so long as man exists.

Physicians are brought into such frequent contact with families in which there seems to be a direct handing down of an acquired vicious physique or tendency to disease, that it is almost a matter of religious faith to believe in the transmission of acquired characteristics. We even believed in the transmission of bacteria and that children were born consumptive. The first blow to this idea was the discovery that the transmission of disease is very rare, and that the consumptive, for instance, only inherits a tendency to infection, which represents only a natural variation and not an acquired modification. In some savage tribes, every normal man is extremely susceptible, while in other races, like the Jews, the susceptible individuals have been so thoroughly killed off that there are none left. We have been blinded by the fact that the natural variation is made effective by unsanitary living, and that even in the worst families the great majority will recover if, early after infection, they are placed in a proper environment. One physician[1] even suggests the probability that through some species of antitoxin, the children of tuberculous parents acquire an actual immunity during development and that they are far better able than the average man to resist infection provided only that they are brought up under good surroundings. Similarly it has been affirmed that syphilis is never inherited, but that it is always a new infection acquired perhaps months after the beginning of the existence of the fœtus as a new being. These rules are now being applied to all apparently hereditary diseases—they are acquirements which might have been prevented in a proper environment.

It is almost impossible to believe that degeneration is not hereditary, for evidence to the very opposite seems to be before

[1] Glick, Charlotte Med. Jour., Nov. 1899.

our eyes daily. It may be of assistance in clearing up the muddle to remember that degeneration is possibly always due to vicious causes which injure the ovum before or after fertilization, and divert it during development from the natural groove into which it is naturally directed by the hereditary impulses accumulated by natural selection from millions of previous generations. If it were hereditary the children should resemble the parents, whereas they usually differ.

That they do tend, when permitted, to seek the normal or revert to the form from which their parents have been modified, is evident from the results of improving the environment of the slum children of degenerate parents. These unfortunates seem to acquire degenerate modifications from the moment of their conception straight on throughout their whole development. If degeneration were hereditary there would be an end to hope of regeneration. Yet genealogical studies show that family lines are constantly varying from and to the average. Some lines end in the most abnormal classes—the highest and the lowest—and these are constantly undergoing change. Aristocratic and degraded families generally last only a few generations before becoming extinct or reverting to the average—the great middle normal class—unless they are kept alive by intermarriage with new normal blood. The upper and lower crust has to be constantly recruited with aberrant types from the middle class—the real people.

It is not at all unlikely that if the fertilized ovum of degenerates could be nourished in a normal womb, it would prove that it did not inherit degeneration, and would develop normally, that is, if it were not already too much damaged by poisons or malnutrition. As such an improved environment is impossible to attain, we must expect degenerates to be born in degenerate families as a result of modification. If one means by inheritance such intrauterine modifications, then of course degeneration is just as much an inheritance as color or stature. Accurately speaking, however, when the germ and sperm cells have united the new creature has received its whole inheritance and thereafter it can only be modified from the form into which it would naturally develop, if it could be promptly cared for. Weismann lays special stress upon this fact, and we must limit the word heredity as the biologists do.

Practically, we find that degenerates have degenerate children and it is a matter of the most extreme importance to the community to know whether this fatal pseudo-inheritance is going to make the child develop into the image of its degraded parents, or whether, if taken in hand early, it cannot be nourished so as to develop into a useful citizen. Philanthropists are doing this very thing, though of course we know that it is impossible to repair the damage already sustained by the time of birth.

Again, a certain amount of neurosis, if we may so express it, is undoubtedly a normal variation following upon the preservation of extreme variations by civilization, and we must expect transmission in such cases which we have perhaps unjustly considered abnormal. In man, as in dogs and horses, the nervous system may normally vary in stability from the most phlegmatic to those " high-strung," " high-pitched " " nervous " types which require such careful management. The latter represent borderland types reaching over into the abnormal neurotics. We must keep in mind the biological law, that a part developed in one species to a greater degree than in allied species, tends to be highly variable. The human brain follows this law, and its variations, both organic and functional, though very great, are strictly normal.

We have long known that criminals are such from necessity and not from choice, and that after they are fully matured, reformation is just as impossible as the regeneration of an imbecile. The belief naturally followed that criminals were born so, but the strict application of Weismann's theories would disprove this. Certainly the good results following the careful training of the youngest criminals tends to show that crime is far more the result of an adverse environment than we once believed—an acquired modification not transmissible, and not a hereditary variation. Of course the more degenerate a child, the more easily does it react to the evil influences of a bad environment and the more hopeless will be the efforts to raise it to a normal manhood. Indeed, the whole matter of the non-transmission of acquired characters or modifications due to environment is removing the foundations of our pet theories. Dr. G. Archdall Reid, has called renewed attention to this point in the *Lancet* in the discussions of the temperance reform. Many

writers positively deny the transmission of the acquired drink craving; and Sullivan, in the *Journal of Inebriety*, shows that the malign effects of alcohol consist in the poisoning of the fœtus, and mother, for in drunken women, the successive children are more and more damaged until non-viable ones are born—the reverse of what occurs in syphilitic infections.

It is unfortunately true that all the facts of degeneration can be logically explained, whether one believes or does not believe with the Neo-Darwinians, that acquired characters are absolutely non-transmissible. This theory emphasizes the important fact of the absence of degeneration in the average man, and holds that species are carried on or modified by those individuals which vary but a trifle from the average and not by those which vary the most. The latter, like the highest and the lowest men, either die out or tend to revert to the normal or average. Ernst Haeckel, in his studies of the evolution of new species, lays special stress on the biological law that aberrant types generally perish and that the survivors are those which hug closely to the main evolutionary stem—a law just as applicable to aberrant individual variations as to aberrant species or orders.

PRIMARY DEMENTIA.

By GEO. P. SPRAGUE, M. D.,

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Nearly twenty years ago Spitzka, in his Manual of Insanity, said: "As insanity is, after all, but the symptomatic manifestation of a brain disorder, and the pathological states underlying insanity are not well known, obviously the simplest and most profitable plan of classification will be the adoption of the clinical method as our main guide; then, where etiology, pathology and speculative psychology furnish valuable distinctions, we may incorporate them as collateral aids in such classification."

Believing that this plan is *still* the simplest and most profitable in furthering the differentiation of most pathological mental states, your attention is called, briefly, to a class of cases which, for want of a better name, are grouped under the title of "Primary Dementia."

While the term *primary dementia* is found in the statistical tables of about twenty State hospitals in this country, its symptomatology and prognosis are given so variously by different observers, that definitions seem desirable at the outset. Primary dementia, as understood here, includes all cases of so-called primary mental deterioration, stuporous insanity and pubescent insanity, most cases of katatonia and melancholia attonita, with occasional cases formerly grouped with mania, melancholia, paranoia and circular insanity. This grouping is based upon the teachings of Kraepelin, and corresponds closely to his dementia præcox, except that he hesitates about admitting katatonia to be only a variety of the fundamental disease.

Primary dementia is a disorder which attacks the physically underdeveloped; the mentally unstable; the adolescent with serious insane heredity; the child cursed with over-study and bodily ills at the time of puberty; occurring, as it does, in indi-

viduals of low physical and mental vitality, the disease generally develops in early life.

Among the patients who have come under my observation, less than 15 per cent have been over forty years of age, while 50 per cent have been under 30 years.

Heredity is an important causative factor; in 30 per cent of my cases insane relatives have been admitted; in 35 per cent, any insanity in the family has been denied; and in 35 per cent no data as to heredity have been ascertained. The fact that in most cases in which the family history could be secured from disinterested persons, insane relatives have been found, gives force to the suspicion that the inherited tendency exists in more than 30 per cent of these cases. In fact, Kraepelin gives it as occurring in 70 per cent of ascertained cases.

Among my patients the number of primary dementias admitted has been 12 per cent of the total admissions, and the cases have been about equally divided between the sexes. Kraepelin gives the admissions of dementia præcox as 5 to 6 per cent of the total admissions, but since he classes katatonia separately with the same percentage, his total would be the same as that given here.

Although primary dementia is sometimes engrafted upon a congenital imbecility, a surprisingly large number of patients have been rather above the average in mental capacity previous to the onset of the disease.

Notwithstanding this, however, small or misshapen skulls, asymmetrical faces, imperfect teeth, malformed palates or adherent ear lobules are found more often in this form than in any other of the ordinary insanities.

The *symptoms* of primary dementia are multiform, and usually begin quite abruptly. With the milder cases we have, as physicians, little or nothing to do, many of the patients not even being considered insane, but only to have suddenly become indolent, erratic or ill-tempered. But the more serious cases make up one of the largest and most discouraging classes of our asylum insane.

Beginning with a few days of insomnia, occipital pain, general restlessness and depression, which gradually passes into exhilaration or mild excitement, the symptom first noticed by the

relatives may be some sudden eccentricity of behavior or speech marking the complete loss of self-control, when the patient rapidly becomes confused, refuses food, becomes mute, or at least ignores questions, neglects his person, removes his clothing, resists every attention, and may even pass at once into a condition of active maniacal violence, a state of depression, or a stuporous condition with catalepsy.

Although a state of depression, a tendency to mania, or to stupor with occasional catalepsy, is apt to predominate throughout an attack, it should be understood that there is not necessarily any regular order of symptoms in primary dementia.

Failure to appreciate this in the past led us to call these cases mania, melancholia, circular, acute confusional insanity, etc., according to the particular stage of the process at the time our diagnosis was made. Excitement, depression, stupor, mutism, verbigeration, refusal of food, negativism, catalepsy, and peculiar attitudes and movements, all occur in a majority of instances at some time during the acute stages. In some cases the three last-named are so transitory as to be seen only by the trained and observant nurse.

Kraepelin states that active sexual excitement is uniformly present, but I have not observed it in more than 3 per cent of my cases.

The panoramic change in symptoms may be so rapid that every one of the conditions mentioned may be seen within six weeks from the beginning of the disease. The average duration upon admission in my cases has been about two months. In some cases remissions occur, from two or three weeks to six months apart; these may be of remarkable suddenness, and may even simulate recoveries. They usually last for a few hours or a few days, but may persist for months. By the trained observer it will be seen that there is, with each remission, some reduction of mental strength. In the cases which have no remissions, the dementia is even more apparent after active symptoms have subsided. At this time, also, it becomes more clear that the peculiar postures, gait or movements, which earlier may have seemed automatic or accidental, are intentional and due to hallucinations of sight or hearing. While visual and auditory hallucinations are common in the early stages, the latter persist until masked by

encroaching dementia. These fictitious voices may have the form of imperative commands to burn the house; to stop eating; to commit suicide; or murder, etc. I have such a patient now, who has long resisted the repeated order to kill her nurse, of whom she is fond.

Such patients sit in particular spots on special seats; walk in certain tracks indoors and out; get into bed by climbing over the headboard or by crawling under it from the back; sit on the floor or on a table, instead of on a chair; touch or stab the food in a definite way before eating; or show many other similar peculiarities, doing certain acts without change for months or years.

The diagnosis of primary dementia is generally easy after its main symptoms are once plainly fixed in our minds. From acute mania it is at once differentiated by the fact that during active excitement there is always confusion of mind with stereotyped movements. From melancholia it can be distinguished by the stupid or confused condition, or by the plainly superficial nature of the depression with absence of the real melancholiac's plausible, or at least logical and definite, reasons for it. Indeed, the patient with primary dementia often shows during his greatest apparent depression full enjoyment of the humorous side of his environment, and it is common to have him assure you he has nothing to worry him, and does not know why he should be sad.

I have said that primary dementia includes most cases of katatonia, but there are, as pointed out by Worcester in a paper on the "Katatonic Symptom-Complex,"[1] an occasional case among epileptics and general paretics in which the katatonic symptoms are so predominant for a time as to make the diagnosis very uncertain. As far as my own observation goes, cases of so-called melancholia attonita are simply instances of primary dementia with marked apathy

Primary dementia is distinct from acute confusional insanity, in which steadily continued confusion, constant fear, blind resistance, and sluggish circulation, combine in making a clinical picture never seen in primary dementia. The most important difference lies in the prognosis, acute confusional insanity being a most hopeful form, while the latter invariably tends to dementia.

[1] The American Journal of Insanity, April, 1899.

In 112 cases of primary dementia which have come under my care, only one has been discharged cured. And this patient became slightly confused and had a vague belief that God did not want her to eat the regular diet within four months of her supposed recovery.

There seems no doubt that early vigorous treatment saves some of these wrecks from the depth of dementia that usually occurs without it. The treatment is symptomatic, and consists in the early use of the nasal tube if food is refused, hypnotics, massage or hot packs if enough sleep is not secured naturally, and the usual tonics, preferably in connection with medicated baths, if the somatic functions be diminished.

Thyroid extract should always be tried and given until its physiological effect is produced, which in rare cases may require grs. xx or more three times daily.

To summarize, there exist a large number of insane persons in whom we can predict, from the moment we make our diagnosis, the appearance of a long array of certain paradoxical symptoms which will after a time subside, leaving the patient in a condition of true dementia.

If this be so, it is highly probable that these cases have a common pathology which should receive more attention at the hands of our microscopists in the future than it has in the past.

A STUDY IN MENTAL RESPONSIBILITY.

By CHARLES W. HITCHCOCK, M. D.,
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So frequently is insanity set up as a defense in criminal cases, and so flippantly is the term "degenerate" bandied from lip to lip, that the thoughtless readily take it for granted that any evidence of degeneracy, however slight, presupposes a condition of mental irresponsibility.

But although even the scientifically trained may sometimes assume that the presence of undoubted stigmata affords good ground upon which to base the prisoner's innocence of crime, society has not yet reached that sociological plane where a highly-arched and narrowed palate, an ill-shaped ear, or asymmetrical cranial contour are regarded as positively determining mental irresponsibility, despite the fact that in the minds of the laity these points attain too easily to the dignity of conclusive arguments and an assumption of innocence at once follows upon their establishment.

Very attractive, indeed, to the attorney for the defense in a criminal case is a theory whereby any aural, facial or cranial asymmetry lends color, if not certainty, to his ready assumption of the mental obliquity of his client.

In a recent murder trial, in which the defense admitted the killing, it was claimed that the prisoner was "not insane, as that term is generally misunderstood—not a maniac—but insane as thousands of people who are walking our streets," and on such a plea the jury was asked to acquit the author of a most brutal murder. What safety for society exists if, on such gauzy pretexts, murderers are to be set at liberty?

Nor is it to the profession's credit that a medical ally is so readily found, who, for a sufficient stipend, will lend his aid to build up a defense out of nothing, and that he, by the mere beckoning of his hand, can summon to his aid professional hosts

(though largely from among the ignorant and unskilled), eager to testify to the absolute amentia of the vigorously healthy prisoner and to prophesy his early death.

I do not by any means decry the importance of recognized tokens of the degenerate type, nor do I fail to appreciate their proper worth. I even wish to emphasize that they should be most carefully sought for and to accentuate the necessity for most careful and repeated examinations, both mental and physical, and most searching inquiries into the family and personal history of the individual under investigation, his conduct in the ordinary relations of life, his habits, associates and environment.

It does, however, seem a consummation devoutly to be wished, that some standard be early established which shall fix, approximately at least, the number and nature of stigmata, the presence of which shall be requisite to confirm a diagnosis of degeneracy. When this is once attained, the time will be ripe for an earnest discussion of the necessary relation of degeneracy to mental responsibility. Certainly, to-day, it cannot be scientifically maintained that all cases of degeneracy afford an unquestionable basis, upon which alone a condition of mental irresponsibility can be predicated.

The brand-marks, both physical and mental, which may be looked for as indicative of the degenerate type have been well enumerated by writers of ability, but no systematic effort seems to have been made to group the essential stigmata or to establish any definite boundary line beyond which begins a distinct and significant departure from the normal. Our hatters tell us that few or none of us show entirely symmetrical cranial contours, and this is undoubtedly true of other measurements as well.

It seems, therefore, not a vain desire that some standard, clothed with due authority, should obtain, in order that the essential requisites of degeneracy should be more clearly defined and better understood. To his regret, the writer has no helpful suggestions to contribute toward establishing either this desired standard or relationship, save as he presents the results of his study of one case, wherein it has seemed to him the evidence of degeneracy (mental stigmata, in this patient) was ample and the history such that a diagnosis of a lack of mental responsibility legitimately followed.

Mrs. R., 34, married, born in this country, of German parentage, had, during most of her seven years of married life, led an existence burdened with domestic infelicity. After one of their numerous quarrels, the husband left the house, thinking such a course most likely to conduce to early domestic peace. Returning late in the evening, he found the door locked and after trying it again went away, remaining absent for two or three nights prior to September 27, 1899. At some time during the night of this date, Mrs. R. administered to herself and her three children morphine pills, and made further ineffectual suicidal attempts by inflicting wounds with a knife upon her left wrist and by taking carbolic acid. The two younger children died as a result of the poison; the mother and eldest child recovered.

The mother was at once placed under arrest, but taken to a hospital to await her recovery from her injuries. She was held on the charge of murder, and the prosecuting attorney, desiring to have it determined, if possible, whether she was insane at the time, asked the writer and a colleague to investigate the case with this end in view.

Many interviews, and under varied conditions, were held with the prisoner, as well as with the various members of her family, her husband, the neighbors, and others, in the attempt to get the fullest possible history, which was developed as follows:

Family history.—The paternal grandfather died at 63 of dropsy. The paternal grandmother died at 83, "of old age," but after 40, is said, to have been in almost constant fear, for some years, that some one would kill her, while during the last ten or fifteen years of her life she bought and played with rags. She was furnished money to carry on this harmless diversion, and collected quite a property in colored rags, which she delighted to arrange, sort over, care for, etc. In other words, she suffered from delusions of persecution for some years, this condition being followed by a terminal (senile) dementia.

The maternal grandfather died at 54, of pneumonia, and the grandmother at 47, having suffered from gall-stones and (probably) pleurisy with effusion. A brother of the maternal grandmother was melancholic and suicided.

Both her parents are living: the father being 58, and having been reasonably healthy until the last eight years. He presents,

however, no neurotic history, and appears to be an ordinarily healthy and intelligent man.

The mother is 53, appears to be well-nourished and strong, but says that she has not been healthy—thinks she married too early (at 17) and had too many children (12). She says that when she was 6 or 8 years of age she was twice brought into the house as dead, having fallen unconscious at play. She recalls that the doctor told her parents that they must be careful of her or she would have epilepsy, but she has had no similar attacks since that time. She has, however, had constant headache from her 12th year, which no treatment has helped. From other and reliable sources, it is learned that she has had repeated hysterical attacks, and that she has been irritable and quarrelsome. Two brothers were the subjects of alcoholism and one sister died of convulsions. The prisoner more resembles the mother in personal appearance and temperament.

Of the prisoner's eleven brothers and sisters, only three are living: one sister, who is fairly healthy, except that she is said to be "nervous" and has habitual headaches; and two brothers, who are reasonably healthy and without neurotic histories.

Mrs. R. had convulsions, "when teething," and up to 5 years of age, had "choking spells." She is said to have been cheerful and amiable as a child, and is not known to have had convulsions after her sixth year, but suffered from nocturnal enuresis up to the age of 16, for which she was frequently and severely scolded. The older sister, who slept with her, said that she would frequently cry out in her sleep and jump about so that she made the sister anxious and frightened. These facts are strongly suggestive of nocturnal epilepsy.

The mother does not think that, as a child, the prisoner was peculiar or unusually jealous, although at times she complained that her sister's clothes were better than hers and would intimate that the parents loved her sister better, and would speak of herself as "only a step-daughter;" but this the mother thought was only the peevishness common to children. Eliza (the prisoner) was always very fond of children from her earliest years. There was no especial disturbance of health at puberty, nor until she was married, except that incident to hæmorrhoids, which were cured by operation. She did well with her music and in school

and was highly regarded by her friends among the pupils and the "sisters," under whose charge she was in the convent.

Of the eight brothers and sisters who died (all under two years), one died at 11 weeks of hydrocephalus, while five either died in, or had had, convulsions. The twelfth child having had convulsions from the age of 4 months to 10 months, at 16 months died after a storm of convulsions lasting a day and a half. This history is so explicit as to admit of no doubt of epilepsy.

The neurotic inheritance of the prisoner is further emphasized by the fact that of her four children all except the eldest have had convulsions and the second child died of convulsions at three years of age. Both Mrs. R. and her mother have goitres.

Examination of patient and personal history.—She is a medium-sized woman of rather "stocky" figure, well-nourished, of blonde complexion, with large rings under the eyes. There seem to be no motor or sensory disturbances; the pupillary and other reflexes are normal. No physical stigmata of degeneracy are to be noted.

She is coherent and consecutive in what she has to say and betrays no evidence of delusions of any kind. She talks rapidly and steadily of her domestic troubles, speaking nonchalantly and with a sickly, indifferent smile of her temptation to drown herself and children on one occasion. She avers that she has always been a loving mother, very fond of, and greatly attached to, her children. This part of her story is corroborated by the neighbors and by her mother, who says that the prisoner would talk about her children until even she (the grandmother) would tire of the subject.

Her own memory is that, with the exception of having hæmorrhoids, she was healthy until she was married, 8 years ago. She was more or less uncomfortable during her first pregnancy, and did not have proper attention, in consequence of which she was compelled to resume her work too soon (3 weeks) after confinement. Her second child was born 16 months after the first and during this pregnancy, there was much leucorrhœa and much suffering from resultant irritation. Between her second and third pregnancies, she had two miscarriages, but kept on with her work, not going to bed. The third child was born two and a half years after the second and the fourth two years after the third. She has lacerations of both cervix and perineum.

She says she has had pains in the lower abdominal region and has been subject to neuralgia in various parts of the body. For the last few years she has had attacks of very severe pain through the body, apparently simulating that of biliary colic; for these attacks morphine pills had been prescribed, and she had taken as large a dose as the doctor had said would be safe, but without effect. She denies ever having had any habit of taking morphine in any form, and says that in all she never took more than a dozen or so of the morphine pills. Those later administered had been purchased for her medicinal use.

She denies any fits, convulsions or loss of consciousness since childhood, but says that she has had "dizzy spells" and had one or more on September 27. She also had a severe attack of her so-called cramps on that day. She has had occasional attacks, "when her whole body was stiff," but has not lost consciousness at these times. She describes these attacks as beginning with a feeling of numbness in the feet, as if they had "gone to sleep," which extends upward, finally involving the trunk and head, when she would become dizzy. Such attacks she had somewhat frequently during the last two weeks she was at home.

She complained of neuralgic pains during her residence in the hospital where she was confined until she had recovered from her self-inflicted injuries. It is learned that she was always more excitable at her menstrual periods and that she was menstruating September 27.

Her story continually revolves about, and returns to, her husband's alleged indifference to his promises that he would devote himself less to friends and more to her, his frequently going away on yachting trips with friends, his scanty provision for her needs, his being influenced by a sister, who apparently disliked Mrs. R., and who, as she alleges, has been a constant mischief-maker, both before and after their marriage, influencing her husband against her.

His general behavior towards her during most of her married life, together with her own physical ailments, so preyed upon her mind as to make her nearly desperate, and she repeatedly told her husband that some time he would "come home and find her crazy." She had made threats of harming herself and the children. This she says she did "just to scare him." Indeed, she

had on various occasions acted somewhat dramatically, so that her husband had come to consider her many threats as only a part of what he regarded as her "acting," which he thought best to treat with utter indifference. On one occasion, he came home a little later than usual and met a tirade of upbraiding and fault-finding and his wife became greatly excited, finally opening her waist and going out into the yard and lying down upon the side-walk, only desisting when he started to go away and leave her there. This incident occurred in the evening and during cold weather. She behaved in this way, she says, feeling that if he cared anything for her he would come and take her up and carry her into the house. She has attempted to scratch him and to choke him and he has slapped her face.

On another occasion, after some quarrel, she attempted suicide by placing her mouth over the gas-burner and turning on the gas, inhaling it until she fell down, when the children began to cry. After a little, she recovered somewhat and then began to realize the significance of her act, upon which she promptly opened the doors and windows and turned off the gas. On still another occasion, she was, as she thought, greatly abused by her husband and humiliated before others by his compelling her to apologize to one of his male friends, whom she had reproached for meddling and attempting to influence her husband to go off with a party of friends, leaving her at home. She then told the husband that if he insisted upon humiliating her, he would not find her alive when he returned. Soon after, she took both children in a small row-boat, notwithstanding the fact that a heavy wind was coming up, and rowed several miles out into the lake to the channel along which large steamers were frequently passing, and where it was dangerous for small boats to be. The water was sufficiently rough to render her position a very perilous one, but she simply put the oars into the boat and allowed it to drift with the wind. She was finally rescued by friends. When asked what she expected would happen, she said with a sickly and indifferent smile: "To drown," having seemingly no appreciation of the real significance of such an intention. At a later interview, when speaking of this occasion, she said that the children's clothes were not even wet; that she might have jumped in, but controlled herself, being perfectly willing, however, that she and

the children should drown if the wind or waves overturned their boat.

Her husband is a gunsmith, locksmith, maker of steel dies, etc., and is said to be a very good workman. He admits being very fond of beer and to having been drunk a few times, but says this has seldom occurred, and he vigorously denies being in any way a drunkard. He seems to be a good-natured, fairly industrious sort of a man of 44, and has no appearance of a man excessively addicted to alcohol. He says that his domestic difficulties date from a few weeks after his marriage and that his wife has always been "cranky," fault-finding, and disposed to make trouble. He tells of various quarrels, during which she has become very much excited, abusive and hysterical over causes which were quite trivial, but which her mind magnified out of all proportion to their true or ordinary significance.

Her parents living far from their daughter (on the other side of the city) have visited her but seldom and have known little or nothing of her domestic infelicities until recently. Indeed, the daughter has sedulously avoided talking about her troubles to her parents and intimate friends, striving before them to make her home appear as happy as possible; but to some of her near neighbors she has talked quite freely, so freely and frequently, in fact, that one neighbor said to me that he had thought her to be of unsound mind, because she talked so, and always repeated the same story. She would come to his home and "fairly empty herself," as he said, and always to the same effect; that she cared for her husband, but that he did not treat her well; that she did not know that she ought to love him and did not know what to do; that she was in doubt whether she ought to live with him, etc., etc. She could never get away from her burden of domestic infelicity. She so magnified the importance of the whole matter as to lead even this casual observer to doubt her mental integrity.

The restraining and comforting influences of religion have never been known in this home, the husband denying the existence of a God, the wife only admitting a semblance of belief in a "higher being," but not in a future state.

The neurotic factors here are many and unquestioned, amply sufficient to produce as their legitimate result the most unstable neurotic organization. It may even be wondered at that she has

endured with so much self-control the ordinary stress and strain of life. She is the embodiment in the third generation of an uninterrupted neurotic heredity, and her own unstable make-up is further shown in her transmission of a like taint to her own children, three of whom have been the subjects of convulsions, one dying epileptic. It is admitted that she was epileptic up to five years of age, and a strong probability of later epilepsy is shown in her nocturnal enuresis up to the age of sixteen, and even since. The attacks, of course, are not definitely proven to have been epileptic, but such a history of "night terrors" and enuresis certainly seems to be most plausibly explained in this way.

Of recent years, she has had, with more or less frequency, attacks in which, as she says, her "whole body would become stiff;" these lasted from five to ten minutes. Her description of the attacks leads to the belief that they were quite different from a simple paræsthesia or a vasomotor disturbance. They began with a feeling of numbness in the feet, which passed upward and involved successively the body and head. "When it grabbed the head," as she says, she would feel faint and sick, "just like sea-sick." On one occasion she fell in one of these attacks, when alone in her kitchen, and had evidently come to dread them, having expressed the fear that she might drop the baby during one of them.

These attacks are certainly so suspiciously like attacks of petit mal that we cannot with any positiveness exclude epilepsy, although no attack of grand mal or complete loss of consciousness is known to have occurred after her fifth year. The improbability of permanent recovery from epilepsy is too well established to need any emphasis here. With such a history, recurrence would be more than probable.

No evidence of epileptic mania or such mental confusion as might follow an attack of grand mal or a psychic epilepsy is here found. Nevertheless we cannot lose sight of the fact that the recurrence of any form of epilepsy would markedly and undoubtedly conduce to an extremely unstable nervous state and to decidedly impaired inhibition.

In addition to her epileptic heredity, this unfortunate woman has been subject to neuralgia and recurring attacks of severe

pain (apparently closely resembling that of biliary colic), one of which she had on September 27. She has also suffered from uterine disease. There is a neurotic taint on both sides of her family and it is not to be wondered at if these physical ills grafted on such a markedly neurotic make-up, coupled with long years of domestic unhappiness, imagined unrequited affection, hard work, with a jealous disposition and a life of necessarily very limited horizon, have all conspired to bring her to such a state of mind that she would grasp at any escape; furthermore, she was lacking in any such deep sense of right and wrong and normal inhibitory powers as would deter a normal mind from the act which she finally committed.

Nor can it be said that this was the result of a sudden impulse immediately following a quarrel, for her husband had been away from her for two or three days and nights, pursuing his usual policy of letting her alone until she should recover a better frame of mind. It could scarcely be regarded as a means of revenge upon her husband, for it was not done in the heat of temper and her children were dearer to her than to him.

Her mental make-up, her heredity, her narrow life, all helped to increase her natural disposition to fail to appreciate things at their true worth. Her husband has not been an excessive drinker; at all events not the worthless drunkard she makes him out; he has not of late years been frequently away on his yachting trips, which have so preyed upon her mind, but claims, on her account, to have largely given up his sailing friends. The sister-in-law, whom she has so persistently accused as largely responsible for her domestic unhappiness, she has not seen three times in five years, and the husband claims to have seen her almost as seldom, and that on such occasions he had sedulously avoided any discussion of his domestic affairs. In short, her troubles have been magnified out of all proportion to their real significance and greatly distorted by a degenerate mind, which is so apt to fail to grasp and appreciate the right relation of things, and so forms and acts upon false judgments, inevitably reaching conclusions at variance with truth and realities. Indeed, this is the common mental path by which such a degenerate mind brings its possessor face to face with the proposition to commit some criminal act, from which the defective inhibitory powers, the common

inheritancy of the degenerate, fail to deter and the act is committed. Just as here, there follows the failure to appreciate the enormity of the crime, which stamps the act of the irresponsible degenerate.

The conclusion seems to me inevitable, after a careful study of this case, that this woman is a degenerate, consequently a defective. That she was apparently normal in the ordinary relations of life, that she was modest and self-respecting, a loving mother unusually devoted to her children, and a good housekeeper, all these facts are in no wise inconsistent with, nor do they militate against, the conclusion that Mrs. R. is a degenerate person. This carries with it the admission that she is not normal. She is evidently abnormal, since she fails in ability to appreciate the true relations of things, and her power of inhibition is subnormal.

She is now, and has been, indifferent to her act, not on account of continued impulses to do criminal acts such as are noted in the habitual criminal. She is not the victim of constant criminal impulses, but was brought to the commission of her act through vicious reasoning, the resultant of inherent inability to rightly appreciate things in their true light. Furthermore, her deficient inhibition failed to give the normal restraint.

To recommend that such an one be held to possess a normal responsibility seems as illogical as it would be unjust. Nor could such a recommendation be justified on the ground that society has not yet so far advanced as to legally recognize that the habitual criminal and the simple degenerate, both members of one great class, should be sequestrated rather than punished; for this would be to deny justice to one class because all classes have not yet been accorded equal justice.

The difference between this woman's impulses and those of the habitual criminal is clear and distinct, though both may spring from a certain defect of organization. Her impulses are not the constantly recurring temptations to do criminal acts for the pleasure of the act and the gratification of natural impulses. She has rather, through a long course of faulty reasoning, and because of conditions arising from her tactless behavior based on such erroneous reasoning, reached a conclusion out of all relation to normal proportions, and, believing her condition to be intolerable, welcomed what seemed to her the only avenue of

escape and finally yielded to the impulse to take her own life, seeking to take with her the children, the dearest objects of her affection, and from whom, even in death, she could not bear to be separated. She had no proper realization of the enormity of the crime, and consequently her weak inhibition supplied practically no deterrent force. She is still consistent in her attitude toward the act, not even now recognizing its true significance, bemoaning the loss of the children only because she is separated from them. Her attitude toward the act then and now is that of an irresponsible degenerate.

All are agreed that she is not a safe person to be at large as regards her own good or the protection of society. Punitive confinement, however, such as would be just for a common criminal, is manifestly out of place in such a case, for the reason that it could neither be deterrent nor corrective, the fault here being inherent in the degenerate make-up. Certainly, all demands of justice and propriety are fully met and society is efficiently protected by the sequestration of this unfortunate woman in the State Asylum for Insane Criminals, which the law has provided for such cases (Sec. 19 of Public Act 81, Laws of 1899, Michigan).

A careful study of this case, then, led to the finding that she is a degenerate person, consequently defective and abnormal, unable to appreciate the right relation of things, therefore unable to form right judgments and reach correct conclusions; and that she is also of defective inhibitory powers. From these considerations the conclusion seems inevitable that she is insane; is certainly not responsible for acts due to her faulty reasoning and defective inhibition, and should be treated accordingly.

Evidently the jury took this view, for on January 17, 1900, on the testimony presented, they acquitted the prisoner of the charge of murder on the ground that she was not mentally responsible.

Under a new law, it then became the duty of the court to have her again examined in order to determine whether in any degree her mental unsoundness still continued. The same physicians further examined her and reported to the court that her mental defect was such that recovery could hardly be looked for and it could not with any fairness be said that she was insane on September 27th and sane on February 1st, although it may be noted

that her attorney and friends were now as anxious to have her declared sane as, only a few days before, they had been to have her acquitted on the ground of insanity.

As a result of this report, the court felt bound to commit her to the State Asylum for Insane Criminals, from which she may be discharged, if the superintendent of that institution determines that her recovery is complete.

The writer has deemed the case worthy of report and ventures to hope that his desire for the establishment of some sort of a standard to which such cases shall be made to conform, or by which they may be measured, or which, at least, may serve as a guide and for purposes of comparison, is not entirely utopian or chimerical.[1]

[1] June 25th, 1900, the newspapers report this woman as returned to her friends, having been discharged from the State Asylum for Insane Criminals "as cured."

THE DUTY OF THE STATE IN THE CARE OF THE INSANE.

By Professor EMIL KRAEPELIN, Heidelberg.

Translated by Stewart Paton.

Among the many achievements in the field of philanthropy of which our century may justly be proud, the advances made in the care of the insane certainly deserve a foremost place. Although ninety years have not yet passed since the founding of the first institution for the care of the insane in Germany, today we have 260 hospitals, public and private, for the treatment of mental diseases, and the number is being multiplied every year. This great development would not have been possible had it not been for the increasing appreciation of the fundamental fact that the effects of mental disturbance are by no means confined to the afflicted persons alone, but that the incidence of insanity is a matter of public interest affecting the well-being of each member of the community. Nor are the reasons far to seek. Insanity means, for the victims as well as those around them, dangers of various kinds, the gravity of which, in certain instances, can hardly be estimated. General regulations which afford protection against the vagaries of the insane are no less necessary than laws whose object is to shield society from the criminal, or—to take a better example—from infectious diseases. Again, on the other hand, the insane themselves are in need of protection and care, which cannot, in a great number of cases, be given by the family, but can only be obtained by means of public aid.

In view of these circumstances it is fitting to ask the question: What are some of the problems dealing with the relations which exist between those suffering from mental diseases and society at large? It is easy to see that these are of widely different kinds, and that the solution will often vary not only for different nations

but also in the same country, owing to the varying organization of the several communities. But inasmuch as, in the end, all the small communities—provinces, counties, parishes, etc.—are only parts of a great whole, it is allowable for us to speak of the psychiatrical problem, which the State has to solve, in its widest sense, more particularly since the share of the smaller communities in the solution of this problem is no longer a medical but an administrative matter. As the insane are a danger as well as a burden to the State, we must aim not only to lessen their present numbers but also to retard their increase. Since in mental diseases, as in all other morbid conditions, prevention is of more importance than is the treatment of those already suffering, it therefore becomes the duty of the State to seek for the causes of insanity and, as far as possible, to remove them. Unfortunately, in the case of many mental diseases, the etiology is still unknown, or at least is beyond the scope of investigations undertaken by the State. Nevertheless, we are fully acquainted with some important and widespread causes for insanity, and their removal is not only one of the duties of the State, but is also within its power to accomplish. Among these stands first and foremost the abuse of alcohol. It is no mere chance that at the present day alienists are in the lead in the movement against alcohol, despite the fact that the general practitioner has sufficient cause to take up the fight with equal vigor.

It is well known that in the asylums for the insane in the German Empire 10 per cent of the patients have been committed on account of mental diseases due to alcohol. In some institutions the number is as high as 30 per cent, and even then these figures do not include numerous cases in which alcohol has been an exciting but not the primary cause of the trouble—in cases of mania, epilepsy and paresis. In 1898, in the Heidelberg clinic, the alcoholics formed more than 13 per cent of the total number of patients; in the men's ward alone the percentage being 25. When we remember that experience teaches that about a third of the living children of alcoholic parents suffer from epilepsy and that, according to Bournvilles, more than one-half of the idiotic children have alcoholic parents, it is readily seen that there is sufficient reason for the State to take up the consideration of

the alcohol question, even if so much misery was not caused in many other directions by this poison.

As alienists we can not share the wish, expressed by the German society of scientists and physicians in a sentence nailed over the gate of a Munich beer-garden, at the end of a " Bierherrlicher Studium," that the use of Munich beer may be a hundred-fold increased in the course of the next century. Should this wish be realized one can but feel that Bavarian finances, the safety of which is jeopardized in the struggle against alcohol, rest on a quicksand into which they must sooner or later sink.

Nevertheless, it must be admitted that the State has promulgated certain laws which promise good results in the struggle against the abuse of alcohol. Probably the most important of these is the possibility of legally depriving the excessive drinker of his personal rights. But we should not lose sight of the fact that the abuse of alcohol can never be minimized, unless at the same time steps are directed against the more immediate effects of the drug. Intoxication is a mental disturbance and one fraught with great danger to society. It is a well-recognized fact that a great number of bodily injuries are due to the effects of alcohol. I have endeavored to make a definite study of these conditions. In the year 1898 I collected all the newspaper notices of crimes due to alcohol committed in the district from which the patients in our clinic were drawn. This district, in the year 1898, contained 640,673 inhabitants. Of these 237,770 lived in towns, the majority of which were small. From the newspaper clippings I gathered that 11 persons were killed by alcoholics, while 47 were severely injured, 9 dying subsequently from the effects of their wounds. 25 brawls were reported in which a number of persons received minor injuries. On two occasions a riot took place in which the police were overpowered, injured, and even besieged, while a band of young roughs terrorized the whole population of the place. In 7 other cases there was opposition to the State authorities, while on 7 occasions great damage of various kinds was committed. Furthermore, a fire, a robbery and a theft were the work of alcoholics. Not less than 13 persons were injured, 6 fatally and 1 severely. Two persons died from severe alcoholism; 2 committed suicide. Manifestly my attempts to draw a picture of the effects of alcoholism

in daily life from statistics obtained from newspaper clippings were very incomplete. It is probable that only the most startling occurrences—and these only in part—came under my notice. But even thus it is apparent that during a single year in the district from which this hospital receives its patients, 21 persons suffered a violent death as a result of alcoholic excesses, while at least 54 were severely and some dangerously wounded. If, as we shall see later, the sum of these calamities is at least as great as those attributable to all the other forms of insanity in the same district, one can hardly dispute the truth of the assertion that alcoholism is the form of mental disease which above all threatens the community. Upon the State, therefore, is laid the imperative duty of opposing, with the aid of its great resources, the development of this form of insanity, because this it is which jeopardizes the safety and the life of its citizens. Here we would only mention, in passing, that the struggle against other habits which lead to mental diseases—the use of cocaine, morphine, ether, and other pernicious drugs—is also a part of the duty of the State. As a matter of fact, the State seeks to restrict the misuse of the first two by limiting their sale to the filling of physicians' prescriptions. It is, nevertheless, an open secret that a morphinomaniac finds no great difficulty in securing the drug in the desired quantities from abroad or even in Germany itself. In this matter the most essential point to be gained in prophylaxis lies in getting rid of the "morphine physicians," since experience has shown them to be the true sources of the habit formed by their patients. At the same time it is not possible, considering the present status of the medical fraternity, to eliminate physicians of this class without driving their patients into the arms of far worse quacks; so that, at present, we are compelled, except in so far as regards the supervision of the sale of poisons, to content ourselves with teaching and warning those who will be the doctors of the future. In northeast Germany the authorities are energetically opposing the spread of the ether habit by placing restrictions upon its sale; and yet, where this is being done, the State is liberally aiding the production of alcohol, a poison very closely related to ether!

In addition to these poisons there is only one other cause of insanity of great importance which to a certain extent can be

guarded against by the State. I naturally refer to syphilis. Since the etiological relations between paresis and syphilis have been definitely recognized, the struggle against the latter has become more and more a part of our duty as alienists. In 1898 in our own clinic more than 25 per cent of the patients were victims of paresis. The number will remain quite large enough, even if we admit that in the 25 per cent are included cases which were not correctly diagnosed, and certain others which we now classify clinically as paretics, but which were not syphilitic. In the Charité, in Berlin, 45 per cent of the males suffering from mental disease were paretic. To limit the spread of syphilis would mean a decrease in the number of cases of paresis, the most common and dreaded form of all mental affections. The attempt to minimize the incidence of this disease may, therefore, be counted as one of the most important of the psychiatrical duties of the State.

It is not within my province to speak of the ways or means which should be chosen to carry on this contest. I must leave that to those who make the study of syphilis a specialty. I would merely call attention, as I have done before, to the fact that the anti-alcoholic movement has an influence in this direction. Undoubtedly syphilis is very commonly contracted by young men, especially officers and students, while under the influence of alcohol. I have under treatment at the present time a prostitute, who from childhood was mentally deficient, had nasal lupus, and a syphilitic infection, but yet had infected a number of students. Such cases would be quite inexplicable unless we admit the predisposing influence of alcohol.

On the other hand, much can be accomplished by sensible instruction given to young people. The foolish frivolity with which many students are accustomed to end their social evenings by visits to prostitutes, thus cheating themselves of life's happiness, must ever appear startling to the alienist, who sees so many robust men pitifully dying by degrees of paresis. In these cases we have to do with patients whose primary infection was very insignificant and healed quickly. Again, military men, among whom both syphilis and paresis are very common, seem to have no idea of the far-reaching character of the danger to which they thoughtlessly expose themselves. In my experience, inside of

two days, in a small garrison town, a number of young officers were infected with syphilis by a prostitute. Careful instruction as to the consequence of syphilis, for their own future as well as for the sake of wife and child, are necessary in order to counteract the free-and-easy conceptions of our young men in regard to venereal disease.

But just in proportion to the unsatisfactoriness of the picture which we can draw of the results of State intervention for the better prevention of insanity, so much the more stress must be laid upon the means which in a relatively short time have been called into use for the care of the insane during life. Countries and provinces are vying with one another in the effort to secure more and more perfect institutions, the best of care and nursing for the different kinds of mental diseases, proper provision for recent cases, patients capable of work, and other classes. It is evident that in connection with the admission of patients into institutions which in any way restrict the personal freedom of the individual, definite legal methods of procedure must, in general, be necessary. The sanction of the law is essential to the real usefulness of these institutions and without it they could never acquire or retain, at least for any length of time, public confidence.

More especially is this true for all institutions that receive their patients from only one district and are thus withdrawn from open competition. Into these all destitute patients, who are allowed no choice, find their way. It is not only unworthy of the State, but in the long run it is also dangerous to entrust the care of such institutions to promoters, who are working only on their own responsibility, be they laity or clergy. The best ordinances of State supervision cannot do away with the danger which attends the transference of the insane from the care of public officials to that of private individuals. Even if State inspection were well carried out, which cannot be guaranteed, only the more apparent abuses could be guarded against. The management of the institution would still be carried on in accordance with the particular views and wishes of those who were in charge and, as a rule, to the disadvantage of the patients. Thus, for example, it seems inconceivable and a gigantic error that the Rhine Province, notwithstanding the warning received in the

case of the Alexians of Marienburg, still continues to countenance the founding of asylums under the care of the clergy. In the course of time disagreeable consequences will be as common here as they are now in Württemburg, which has already placed a part of its insane under the care of private and clerical corporations.

Let us grant for a moment the supposition—the correctness of which, in general, must be disputed—that it is possible for a superintendent (moved by religious or non-religious motives) to devote himself to the care of the insane, with the same disinterestedness, earnestness and fitness as is rightly considered essential everywhere in State Institutions. Granting, further, that supervision by the State, which would preclude the possibility of too great individual power, were practical, there would nevertheless exist, according to our view, this insurmountable difficulty against the private care of the insane. Such a condition of affairs would not in any way be adapted to the advancement of our medical knowledge or skill. With a few marked exceptions, asylums for the insane under private control, especially those under the direction of the clergy, have not contributed one tittle to the development of scientific and practical psychiatry. Nor is the reason far to seek. This scientific sterility is due to the fact that in such institutions the greatest attention is paid to conducting the establishment smoothly; this aim coincides with the personal inclinations of the staff, while scientific progress is regarded more as a side issue. As a result, those physicians who are seeking for more satisfying results in their profession do not enter the private asylums, but the public institutions, in which scientific activity is not only present but is zealously cultivated.

In this connection—to take as a single concrete example the gigantic institution at Bielefeld, where an exceptionally large number of cases of epilepsy suitable for study are always to be found—it is a very striking fact that, during the whole time of the existence of this hospital, it has contributed next to nothing to the study of epilepsy, while, on the other hand, in the much smaller Wuhlgarten in Berlin, an extremely active spirit of investigation was developed from the very start.

To a large extent the care of epileptics and idiots is entrusted to private or clerical care-takers (although in Prussia this duty

has just recently become a matter of public concern) and as a result, there is no branch of scientific psychiatry so little developed as that of the study of idiocy. But while freely recognizing the great work that teacher and priest have accomplished in this thankless and difficult field by their painstaking efforts to instruct these patients, and while not wishing to dispute with them a domain which is so particularly their own, one must, nevertheless, not forget that idiocy is a disease. Progress in the study of this morbid condition—which includes a great deal more than the conception of a practical method of instruction—is only to be expected as a result of the work of physicians well trained in the study of psychiatry. Again, as regards the important question of cretinism, which is of so great moment in Baden and Hesse, so long as the care of idiots, as in Baden, virtually falls to the various charities, the rôle of the medical and especially the scientific investigator must always be very limited.

It must therefore be emphatically insisted that epileptics, idiots and alcoholics—since they are to be submitted within certain bounds to a restriction of their personal freedom—should be cared for only by the State, and that this care forms a part of that province of medicine concerning which hygiene, and more especially psychiatry, has the last word to speak. No one would think to-day of entrusting the care of the insane—insane in the restricted sense of the term—to the laity, nor should such an arrangement be thought of in connection with the other groups of mental diseases. The essential gain already attained by the establishment of State supervision of the insane, will, we trust, soon be realized also, without any great drawbacks, in the care of epileptics, idiots and alcoholics.

But, although we must struggle resolutely for State care for pauper patients, we cannot deny the existence of reasons which would warrant the establishment of private institutions for patients with means. It is the duty of the State to care for those who cannot help themselves, even though it may be doubtful just where the line is to be drawn. In general a public institution cannot, without endangering important interests, meet the claims upon its organization, nursing and medical service, which are often made upon it by the relatives of the well-to-do patients. The whole management can be greatly embarrassed, and hence

arises the danger that attention to the better-paying, and consequently more exacting, patients and their relatives might react unfavorably upon the care of the majority. For this reason the State, although such a procedure might be to its financial advantage, does not often decide to make a business of caring for rich patients on an extensive and luxurious scale, as is done in Leubers and Ilenau, and in many instances in Switzerland. The care of this class of patients belongs essentially to private establishments; the free competition of various institutions is a real incitement to careful management, and thus all are kept up.

We possess in Germany a number of private institutions whose equipment and management must be regarded as standards of efficiency. As is only right, they are all under the direct inspection of the State—an inspection which in the last few years has become more rigid, for the most part owing to the war waged by the press against the alienists. But one should not be deceived into thinking that the only guarantee for the efficiency of a private institution in all its departments is dependent upon the qualifications of the medical director. An institution may be utterly bad, although there may be no illegal proceedings evident. The fundamental error is not so much inadequate supervision, as the ease with which a private institution may be founded under our license laws. The medical direction of a State institution, according to the statistics of Hoppes,[1] is given only to those who have been members of the medical profession on an average for from 13 to 14 years. On the other hand, any recognized physician of Württemburg may become the director of a private institution so long as he fulfills the requirements of the license law, and in Bayern and Prussia a two-years training in the study of mental diseases has only recently been required. Under such conditions it is no wonder that there are private institutions which have no claim to public confidence.

The position of medical superintendent in a private institution, even if one disregards the duties connected with the administration of a large organization with its spirit so fatal to intellectual growth, is made even more difficult than a similar position in a State institution, on account of the more numerous and more ex-

[1] Allgemeine Zeitschrift für Psychiatrie, liv, 429. 1898.

acting demands made by pay patients. Only physicians who have been fully trained and have had experience in the study of insanity should have the right to be put in charge of a private institution. If I am rightly informed, in Hungary ten years' work in a State institution is required of a medical superintendent of a private institution. Our legislators, in my opinion, have committed the fatal error of regarding private institutions for the insane in the same light as other private hospitals. But, since the patients in the former are deprived of their personal freedom, are not allowed to choose their place of abode or act for themselves; further, since they cannot obtain any recognition of their complaints, they need for their protection other safeguards. It is no argument to say that with the exposure of great evils the permission to carry on such an institution may be withdrawn. On the contrary it may be urged that, even with the prescribed semi-annual inspection, many persons who do not rightly belong in an asylum may remain in confinement for a long period. Again, it is not always owing to the great mistakes that the patients have the most to suffer. It is the general tone of an institution which stamps it as reliable or unreliable. Those who are really in earnest in their attempts to benefit the condition of the insane must see to it that the management of a private institution is entrusted not only to the physician against whom no facts can be brought to impeach his trustworthiness, but to him whose scientific knowledge, experience, and personal characteristics should be sufficient guarantee for the proper discharge of his difficult and responsible duties. This should hold good for large and for small institutions; for institutions for the curable and for the incurable; inasmuch as the demands made upon the physician in charge vary in quantity, not in kind.

According to Lähr's figures, the private institutions—more than 120 in number—for idiots, the feeble-minded, epileptics, alcoholics—have increased less rapidly than the public asylums. In all parts of the German Empire the number of destitute patients has multiplied out of all due proportion to the population, and as a consequence, except in a few parts of the country which are well supplied with institutions, overcrowding is only too common. This condition of affairs is partly attributable to the fact that a district decides to build an institution only when the need

for it is absolutely imperative. Institutions are finished at a time when they are totally inadequate to, or at least can only partially meet, the needs of the times; and hence it happens that they are filled up with extraordinary rapidity. Thus, in Baden the Emmendingen asylum was not completed until 25 years after the need for a new institution had been felt, and the original plan was not changed. As a consequence almost 1000 patients were admitted in the course of ten years, so that the original plan for abandoning the Pforzheimer institution could not be carried out. The number of patients in Baden who seek the care afforded by institutions has shown an annual increase of about 100. This number, in proportion to the yearly growth in population of 12-13,000, is very much too great. We cannot, however, admit that the number of mental cases in that period has increased so rapidly; at any rate our knowledge of the causes of insanity in the last ten years has not broadened out sufficiently to explain such an increase. The explanation probably lies in the fact that the need of better provision for the care of the insane has made itself felt more and more and that the increased demand for accommodations is in part dependent upon the new conditions of life, in part upon the ever-widening field connected with the care of such patients, necessitating also the building of new and more accessible institutions.

This increase is also influenced in a large measure by the general financial prosperity and altered social customs. The correctness of this view is based upon experience gained in different countries concerning the new demands made in regard to the care of the insane. As has often been shown, the high pressure incident to commercial development, the growth of cities, the spread of factory life—all increase the difficulties of the home care of the insane.

While under the more simple conditions of country life it is possible to provide for the care of the insane at their homes, it is exceptionally difficult to do so in the city. On this account, more especially, there appears to be an ever-increasing tendency to put troublesome patients into institutions as soon as possible, particularly since the old-fashioned mistrust of these places is slowly disappearing. Again, this plan is very apt to be followed

when the patient's expenses are paid by some charitable society, or when a free bed is at his disposal.

The various difficulties in connection with the acceptance of a patient by any given institution have also to be considered, and it will be found that the number of patients desiring admittance is always proportionately greater from the immediate neighborhood than from the outlying districts. Again, at the opening of every new institution an unexpected number of patients suffering from mental diseases, coming from all parts, present themselves for admittance and the accommodations are overtaxed. The overcrowded condition had led to the establishment of a waiting list and to the removal of all patients from the asylums, who could possibly be taken care of at their homes. As a result, there was not only an accumulation of troublesome patients in families and general hospitals, but the institutions for the insane found it necessary to get rid of their patients as soon as there was any possibility of doing so.

At the close of the opening year (1889) 325 patients remained at Emmendingen. This influx was due in part to the overcrowding of other institutions. The annual increase from that year up to the end of 1896 averaged 78.6 patients—an increase out of all proportion to the growth of the population. The extraordinary number of patients coming from the indigent classes has been without doubt the principle cause of the overcrowding of institutions. We have even now a very similar condition of affairs in Baden. The fact that so few cases are discharged must lead more and more to an accumulation of patients outside any given asylum with the result that a new institution, built all too late, is immediately filled to its utmost capacity.

In this connection the question is pertinent: Does the general attempt to bring about a better care of our insane by placing them in institutions represent a practical philanthropy and is it a healthy sign of our social life? In other words, should one aid or oppose this movement? In view of the enormous number of insane patients who tax to the uttermost the efforts made to care for them, one often hears it asserted that the relatives should be made to take upon themselves the care of their own unfortunates, as was formerly the prevailing custom, whereas as a matter of fact the majority now rid themselves of all care and responsibility in

the matter by placing such patients in an institution. In opposition to this idea, the alienists have always asserted that, as a general rule, cases of mental disease, especially those of recent origin, cannot be taken care of in the family, but should be sent as soon as possible to an institution. This claim is founded on the experience that the proper restraint and cure, or at least improvement, in the condition of the patient are more easily obtainable within than outside an institution.

Again, it may be argued that a large number of the insane are to a greater or less degree dangerous to themselves or to those who surround them. In order to get an idea of the magnitude of this danger I again attempted to obtain some ideas on the subject from the newspapers. The results for the year 1898 were very meagre. From one district were reported 6 cases of maniacal excitement that had given rise to offenses against public order; in addition there were one murder, an assault, 2 cases of fraud, 2 incendiary fires, the acts of insane persons; one patient disappeared, 2 ran away, 3 met with accidental injuries, though these were not fatal, one quarrelsome patient coarsely insulted public officials. If one compares this series with the unfortunate results of alcoholism, it is easy to see that the harm attributable to those suffering from mental diseases is relatively insignificant. Generally speaking, patients suffering with mental diseases are placed under restraint much sooner than alcoholics. Our investigation was necessarily incomplete, inasmuch as in the case of many persons who commit crimes or acts of violence the mental symptoms are recognized only later. The proportion of insane patients who committed offenses against the public morals, and of those who were guilty of infanticide, was not inconsiderable. Two cases of assault upon children committed by old men must be attributed to mental disturbances. In spite of all these the number of cases of mental diseases which come to us from the prison in Bruchsal and the workhouse at Kislau is not large. In 1898 four came from Bruchsal and five from Kislau. Of course there are everywhere many patients suffering from epileptic disturbances, congenital or acquired feeblemindedness, degenerates, alcoholics, and others, who from the standpoint of the alienist should be classed among the mentally unsound. Thus,

also, among incorrigible tramps are to be found a large proportion of mental cases.

There still remains to be considered a group of actions which are as characteristic of mental diseases, as bodily injuries are of alcoholism, viz., the suicides. I succeeded in collecting from the newspapers, for the year 1898, notices of 96 suicides and 25 attempts, occurring in our district. Since the number of suicides in the year, according to the official records, was 130, about 25 per cent escaped my notice, a fact that gives at least an approximate basis upon which to estimate the inaccuracies in these statistics. Of the individuals who committed suicide, according to the newspaper notices, 23 were insane, 2 were alcoholics. Among those who were rescued 3 were insane. Unfortunately the motives for 40 suicides and for 12 cases of attempted suicide were unknown.

If we consider only the cases in which the causes for suicide were known, we shall find that insanity and alcoholism were responsible for 41 per cent. This number is probably not too large, since among the cases in which no cause appeared one may suppose that there was a large proportion of insane individuals. I found that, in Saxony, at least 33.3 per cent of those saved from suicide were insane in the clinical sense. In Saxony the rate of suicides among the healthy part of the population is one-third larger than in Baden, where in our section, in the year 1898, the number amounted to 20.3 to every 100,000 of the inhabitants. It is, therefore, to be expected that in Baden the number of suicides, who are the victims of mental disorders, is proportionately larger than in Saxony. In any case we may admit that hardly less than 55 persons suffering from mental diseases commit suicide annually in our district. From the very beginning, as may be imagined, the chief danger to which insanity may lead is suicide. The other crimes committed by the insane are relatively much less frequent. These experiences teach us that there are important reasons why the careful oversight of patients is necessary, even without any regard to the fact that such patients have a claim to protection from their unfavorable surroundings, and above all have a right to the best possible medical treatment.

From the most practical standpoint, then, one will come to the conclusion that the burden of the insane upon society can be re-

duced to a minimum if the patients are committed to an institution as soon as they are in need of treatment, or become dangerous. In this way not only is the possibility of cure increased, but at the same time the number of deeds of violence is lessened. Furthermore, it is evident that the domestic inconveniences caused by the presence of an individual suffering from some grave type of mental disorder are very great. A single attendant in a well-planned institution is sufficient to watch over a number of patients, whereas one insane patient at home may require the individual attention of one or more persons, who are thus prevented from earning their living. Only one who has learned from experience can have any idea of the disturbing influences which a single insane person may exert upon the daily life of even a well-to-do family.

Finally, the fact should not be underestimated that in the care of the insane in institutions we possess the only means by which it is possible to eliminate the most frequent cause of insanity, namely, heredity. Although it is generally believed that mental disorders in the widest sense are inherited, society at large takes but little care to restrict their spread. Every alienist must repeatedly have had the experience of being asked, in the milder cases, if marriage is permissible, when one of the parties has suffered from an attack of insanity, and then in spite of his warnings has seen the marriage contracted without thought of the consequences.

The confinement in an institution debars many patients from propagating their baneful qualities, for which, when at liberty, they have not only the inclination but every opportunity. I knew a feeble-minded girl who at 35 years of age had already had 8 illegitimate children. The father of the last child was an attendant in the hospital in which she had been a patient. Again, in view of future possibilities, it should be decided to keep even harmless patients in asylums.

In general the need of a more adequate provision for the care of the insane in institutions is regarded in Germany as among the most important questions of the day. The great sacrifices already made by the provinces of Saxony and of Rhenish Prussia afford the strongest testimony of their appreciation of the fact that the struggle against the plague of insanity should be as ac-

tive as possible. As Sommer has recently shown, only one class of asylums—the city asylums—have remained entirely inadequate to the present needs. Griesinger advised that in addition to the large institutions, intended for the more prolonged care of patients, small reception hospitals should be erected in the large cities, the purpose of which should be to care especially for acute mental cases and to select from the remainder those patients who need a longer period of treatment in the larger institutions. The importance of such hospitals is abundantly evident. There are many cases of mental disorder which run a very short course, and are often at an end before the official transactions connected with the commitment of such patients to an institution, often at a distance, can be completed. To this class belong the cases of alcoholic or epileptic delirium, many cases of insanity connected with acute diseases, pregnancy, hysterical attacks and the frequent periods of excitement occurring in the course of the chronic insanities. These conditions are often fraught with the greatest danger to the patients and to those about them. They call for the most careful nursing and the exact knowledge and experience of a trained alienist. Today the great majority of these individuals go to the nearest general hospital, where a few cells are reserved for insane patients. Into these the unfortunate sufferers are often put by force and are locked up either until they become quiet or until they are committed to other institutions—a process which may not be completed for several weeks.

It is clear that such a line of treatment is very far removed from what can be called a well-regulated care of the insane. Thus, in the very cases in which the best treatment, quiet in bed, constant watching, judicious hydrotherapy, in addition to the care of a well-trained alienist, are imperative; even in the recent cases with bodily suffering and the most excited condition, we find a complete absence of proper care, and instead, the patient is simply locked up in a cell. The disgraceful character of this treatment has been emphasized by the occurrence of suicides and other acts of violence. Of course in sparsely populated regions these lamentable conditions cannot be altogether remedied at once. On the other hand, it is simply unpardonable that, so far, only a few of our large cities have determined to put an end to this state of affairs by providing hospitals for the insane. What shall be

said of the fact that in the second capital of the German Empire, Munich, the university hospital has but two small rooms, each containing three beds, and several cells widely separated, for which there is only a single night-watchman? This institution receives every year six or seven hundred cases of mental diseases, and the psychiatrical clinic having no bath for its patients has to share that used by the Genito-Urinary Department.

The true reason why cities hesitate to do away with these disgraceful conditions, in connection with the temporary care of mental cases, is attributable to the fact that the care of the insane is everywhere a matter in which the province, the county, the cities and the State are immediately interested. The cities decline to build their own institutions, because they believe that in so doing they will assume a burden not really their own. They are satisfied with simply supplying accommodations for patients only when the need becomes imperative, since they fear that, if they take the initiative, a major part of the care of the insane will gradually fall upon them. This position seems to me to be only partially justifiable. No large cities can get away from the responsibility of providing some sort of accommodation for the acute cases, the strangers and the patients who are under police supervision.

This fact is well illustrated by the above-mentioned example of Munich, which possesses a large county asylum within the jurisdiction of the city. The reception of patients in a proper asylum is hampered with so much red tape that it cannot be accomplished quickly enough to satisfy the needs of a large city. In the great centers of population the demand exceeds by far the supply offered by the hospitals for the insane. It seems, therefore, only proper that the cities with their greater needs in this direction should erect institutions suitable to meet the immediate wants of the patients. If they do not do this, they are harming not only themselves, but the patients as well.

Nevertheless, the bounden duty of the State to assume the care of its insane is in no way diminished by such action, and certainly a just assignment of the proper share of both parties in this duty should be possible. Already in not a few cities, arrangements have been made by which institutions for mental disorders have assumed the duties of city asylums—greatly to the advantage of

all concerned. Every city asylum, which is naturally more advantageously placed when close to the other institutions, offers a field for the well-trained alienist. Still another important advantage may be mentioned. Many cities which have no hospital for nervous diseases or an asylum in their neighborhood lack the services of an alienist, because the latter cannot get along without a place to which he may send patients or in which he can do scientific work. The hospital positions are often held by favored neurologists or police physicians, who at best have had only a limited experience in institutions for the insane. Only exceptionally are the standards attained which are demanded by us in a large city.

But apart from the important duties connected with the proper treatment and differentiation of the cases in the city asylum, an alienist should be the adviser of the family physician in psychiatrical disorders and also must be able to express an opinion in the courts in difficult cases. In this last connection the lack of a skilled alienist is beginning to be felt in many of our large cities.

In discussing the care of the insane in private institutions we have already considered some of the most urgent phases of the problems that the State has to solve, namely, the framing of laws governing the care of the insane.[2] The most important legal phases of this question have to do with the establishment of the criminal laws on a firm basis, the defining of the position of the insane person in relation to the statutes, the care of the insane inside and outside of institutions, the protection of society from dangerous patients, and the protection of the sane from being wrongfully deprived of their personal liberty. In all these directions the needs of the times have given rise to many provisions which belong partly to law, and partly to State or ministerial regulations. One could wish that there was more unanimity of opinion in the various parts of Germany, although it is by no means certain that, even then, under the present condition of affairs, the most practical methods would be put into use. The question whether it is necessary or would be advantageous to codify all ordinances relating to insanity is not pertinent. On the one hand, the various ordinances belong to very widely differing

[2] Reuss, Der Rechtshutz der Geisteskranken.

branches of the law, having their foundation partly in criminal, partly in municipal law, in the rights of the police and in the civil processes. Various other points such as the registration, reception and discharge of patients and inspection of institutions are points, which today are not sufficiently well elaborated to warrant putting them into the form of a definite law. An urgent necessity for legislation of this kind does not exist for the moment.

In connection with the various points for which the legislation dealing with the insane should provide, it may be said that the status of the insane as regards the civil law has been fixed by the new code, largely in conformity with the wishes expressed by alienists.

A great improvement in the present laws is to be found in the greater possibility afforded of depriving insane persons of their personal and legal rights. This is much more in accord with present needs. Again, the taking away from alcoholics of their legal rights may furnish the necessary incentive to the State to establish hospitals for alcoholics under medical supervision and thus revolutionize public opinion on this subject and awaken it to a sense of the dangers arising from the abuse of strong drink. No less urgent is the necessity of resorting to some similar measures against habitual users of morphine and cocaine.

It must be regarded as a great defect in our laws that the proceedings to legally deprive an alcoholic of his rights cannot be taken by the State's Attorney. The relatives and the wife of the patient will hesitate to take this step through fear of future revenge on the part of the patient. Not infrequently interference by properly constituted authorities is imperatively needed for the public safety.

Unfortunately, in the consideration of the capability of a person to conduct his own affairs, we have to deal with the problem of the freedom of the will. The settlement of this question in cases involving the discussion of the patient's responsibility is generally evaded both by doctors and lawyers. The difficulty is fundamental. It depends upon the great difference which exists between the scientific and the legal view of the criminal; its consideration cannot be confined to a paragraph, and can only be settled by a complete reconstruction of our criminal code. I shall

not stop to inquire whether the recognition of a lessened responsibility, as it appears in many statute-books, can be made to correspond more nearly to the natural conditions without a radical change of the whole legal machinery. I should consider it much more important to have the jurist of the future receive careful instruction in the study of mental diseases; although at the same time he should be warned against any exaggerated idea of his own capabilities to form an opinion as to the existence of a mental trouble. Such a danger, however, according to my rather extended experience, is minimal. On the contrary, it appears that those jurists who study the facts in cases of mental disease which involve legal points very soon lay aside their early apodictical certitude in the matter and, perceiving the difficulties of the circumstances, are ever ready in doubtful cases to defer to the opinion of a trustworthy specialist. Unfortunately, the great majority of jurists, particularly when they do not hold an office, show very little interest in the psychiatrical problems of their profession. Nor does the State lay any special stress upon the fact that they would do well to look more deeply into this quite different world of thought, although it may compel them later to give most important decisions concerning the weal and woe of patients suffering from mental disease. The fact that these legal officials have to depend on expert testimony on nearly all points, and their absolute lack of personal experience, make them mere tools; or else in their conceit they disregard those who are capable of advising.

The difference between the scientific and the legal conception of the criminal is perhaps shown best in the parts of the law dealing with the treatment of criminals suffering from mental diseases. If an individual is insane, in the sense of the legal statutes, at the time of or before the commission of a punishable act, he is deprived of all legal rights and is simply regarded as an insane person. If he becomes insane after the act but before judgment has been pronounced, there is a temporary stay in the proceedings, which are taken up again after the prisoner's return to health. If the diseased condition becomes apparent after judgment has been passed but before the sentence has been put into execution, on account of the changed physical condition, the penalty cannot be exacted so long as the mental disturbance lasts. In the case

of incurables the punishment is never inflicted. When a person becomes insane after the term of punishment has begun, his imprisonment is not interrupted, but the individual is kept in confinement and the period of illness is included in the time of penal servitude. In this connection, then, there arises an idea of punishment that is foreign to that conceived of in all the ordinances. Hence it follows, that a patient of this kind must be released as soon as his term of punishment is completed.

In point of fact, in Baden and in parts of Prussia this class of patients is not cared for in the prisons but in special wards for the insane, connected with the prison. On his recovery the patient can be retransferred to the prison or the period of treatment ends at the expiration of the term of punishment. It is certainly essential and necessary that a small department in the prison should be set aside for the treatment of acute cases of mental disease, just as there should be a small division to be utilized for patients suffering from other diseases. But, on the contrary, it is expressly stated in our laws that in the case of a criminal who is insane, the period of punishment is not curtailed, provided that the disease begins after his entrance into jail. It would be more just simply to place those criminals whose mental disturbances have the appearance of lasting for a long time, in asylums, as is done in the case of those who are thus affected before judgment is passed. The restriction might be made that after complete recovery the patient should serve out his full term of punishment, full or partial allowance being made for the period of confinement in the institution, just as the time of observation (according to the criminal code) is considered as "the period of arrest for observation."

In this way the pressure upon the small departments of the prisons where patients are put for observation would be lessened and there would no longer exist the anomaly that patients suffering from mental diseases and not being capable of standing the punishment should have to pay a partial penalty. In Prussia the removal of cases of mental diseases to asylums before the end of their terms is now carried out in incurable cases.

The desire to enact laws with regard to the insane is generally influenced by the fear of illegally depriving individuals of their personal liberty. Public opinion—aroused by a few real, as well

as by many imaginary mistakes which have been worked up by the press, and which, unfortunately, have also been made use of in the Reichstag for political ends—is influenced in general by the view that legal proceedings dealing with the reception of patients into asylums should be made as difficult as possible, in order to prevent the misuse of the power vested in the physicians. Rieger, who has ably discussed this question, shows that our criminal law already provides sufficient penalties for transgressions against the law regarding infringements upon the personal liberty of the patient. The various conditions upon which patients are received into institutions also serve the same purpose.

The reception of insane patients into asylums is justifiable from two considerations: The first is personal and looks to the treatment and care of the patient. The second regards the general welfare, and is concerned with the protection of the public from danger coming from such patients. It sometimes happens that patients ask of their own accord, from either one of these two reasons, to be taken into institutions. In this case there can be no question as to any illegal taking away of the individual's liberty. Special ordinances in these cases are as unnecessary as they would be for the reception of patients into a general hospital; nevertheless, in Baden as well as in Württemburg, voluntary commitments are not as yet allowed. In Prussia it is necessary that there should be a public announcement of the fact; in Bavaria the assent of the police bureau is necessary. As a natural consequence of the fact that the commitment is voluntary, it follows that the patient is free to leave the institution whenever he wishes. The greatest inducement for patients to enter an institution is the wish to be cured. Unfortunately, however, the majority of the insane are unable to appreciate their condition, so that only in rare instances do they ask voluntarily for commitment. Too often, on account of their condition, they are unable to make an independent and reasonable decision, and yet, despite this fact, the right to act for themselves in matters of business can only be taken away from them after a special legal process. From the legal standpoint the provision could be made that only those patients should be put in an institution against their will who have been legally deprived of their rights, and in certain institutions this view is acted upon.

One can easily see how such a measure could restrict the field of usefulness of every asylum. In a great many cases it is necessary for the patient's own good that he should be placed in an institution at the earliest possible moment, not only if danger is to be averted but also as regards the chances of recovery. To deprive an individual of his legal rights is a more or less expensive process. Even if these rights are later given back, the deprivation may give rise to many unpleasant complications. With justice, therefore, at least in connection with the reception into institutions, the necessity for a preliminary taking away of the personal rights of a patient has been done away with, and in its place the natural right of the family to act for him has been substituted. In general, it may be admitted that the relatives of a patient have his welfare much more at heart than any one else, and that it is they who are called upon to look after him when he is not in a condition to take care of himself. As a rule, then, when the question arises whether an individual should or should not be placed in an institution, the decision ought to be made by the relatives. In accordance with this view the requests of the relatives should be taken as the basis upon which is founded the demand for the admission of a patient into an institution. When an individual suffering from some mental disorder has no relatives, or when these cannot be consulted, the local magistrate assumes the duty of considering the advisability of ordering his commitment. Misuse by the family of their prerogative and the committal of any person on insufficient grounds are guarded against by the fact that a medical certificate is in all cases necessary. At the present time only physicians appointed by the State are required to have had even a limited training in psychiatry, and only the certificates signed by those able to give proof of such training are valid. Very often the certificate is nothing more than a mere matter of form, since, at least in Baden, the personal examination of a patient by the municipal examiner is not necessary. Insistence upon a more rigid method would lead to no practical good results, since the expense involved would be too great; and, furthermore, reexamination of the patient by the physicians in charge of the institution would always minimize the danger of wrongful committals. Above all it is not always easy, even when there is no question as to the existence of mental

trouble, to obtain an expression of opinion which is reliable, in regard to the necessity for treatment in an institution, and it not infrequently happens that patients are put in asylums who without any great difficulty could be well taken care of by their families.

As has been said before, for the public welfare it would seem advisable that too great obstacles should not be put in the way of committing patients to institutions. As a rule it should be left to the family to decide what burden of personal care of their sick they are able and willing to assume, especially when the expense of the care in an asylum falls upon them. The fact that the family is compelled to pay for the patient's care would, to a large extent, counterbalance any error which might occur in making a decision in any given case. The alienist frequently meets with patients who appear quite harmless when in an institution, but who, when given greater liberty become dangerous; this is especially true when such individuals are under the influence of alcohol.

Practically, then, it is advisable to add to the difficulty of committing a patient only when the physicians of the institution advise against his reception. In addition to the certificate declaring the existence of a case of mental disease and the application for commitment, the aid of the public authorities is requisite, and in this respect the procedures vary in every part of the Empire. Sometimes the police or some higher or lower official must be notified, while in other cases the police must sanction the commitment. In Prussia, in addition to this, in the cases of individuals who have not been deprived of all rights, the State's Attorney must be notified. As a rule, this action of the officials has no other significance than an inquiry into the social condition of the patient and the regulation of the cost of providing for him. For the most part, these officials, on account of their numerous duties, are not able to form an independent opinion as to the necessity for the commitment, so that they have to rely upon the medical certificate.

The case is quite different, however, when the officials are called upon to say whether or not a patient should be committed. This question arises if their aid is demanded by the patient or if the shutting up of the individual is asked for on grounds affect-

ing the public safety. In both cases the State is called upon to decide whether or not the facts warrant the taking away of the personal liberty of a patient. Since the physician is not always in a position to verify the statements which are made in relation to the case, it is necessary to examine as many witnesses as may be essential in order to arrive at a correct judgment in relation to the case in point. If the existence of mental disease is proved, the next step should be taken by the family.

But it not infrequently happens that the patient is put in an institution against the wishes of his family. This is necessary if he is in any degree dangerous to himself or to those around him; if he offends public decency, or is neglected by his family. In all parts of the country the officials, who are responsible for the preservation of public order and safety, have the right to place such patients in asylums, by force if necessary, and to keep them there as long as the exigencies of the case demand. Such a procedure would evidently conflict with the natural social rights of the family, and although the need of such a measure is imperative, its working should be limited by provisions that will guard against its abuse. In Bavaria, in such cases, the State's Attorney must be notified, so that he may have the opportunity to apply for the taking away of the personal rights of the patient and thus bring the case into court. In Prussia the commitment of a patient to an institution against the will of the family is permitted only when the patient has already been deprived of his legal rights, or, if proceedings are already being taken to this end, on the recommendation of the ordinary law courts. In Württemburg these cases have been carefully provided for since 1894. One court considers the testimony of one or more physicians; another court makes a minute examination concerning the facts presented which point to the necessity of the commitment of the patient, giving an opportunity to the relatives, and under certain conditions also to the patient, to offer testimony; finally, after a review of all the facts connected with the case, a temporary commitment to an institution for six weeks may be recommended. The future of the case then depends upon the opinion expressed by the medical officers of the asylum after the expiration of this time.

In Baden the decision regarding the commitment of a patient

against the will of the family rests with a district court which meets from time to time. Before the taking of the testimony of the city physicians, witnesses are brought to give evidence as to the social position of the patient; the testimony of the State's Attorney and, when necessary, that of the medical superintendent of a well-recognized institution are also called for. Of late, instances have occurred—and the act has been especially approved of by the Minister of the Interior—in which patients whose commitment has been urgently demanded by the examining physician of the district against the will of the family, have been committed on the order of the officer of the institution belonging to that district. Such a method of procedure is not to be commended. Since the local officials refrain from the expression of any opinion by which an independent prosecution can be instituted, the need for such a step is based solely upon the very fallible judgment of the district physician. Disregarding the fact that so many of these men, especially the older ones, have never been in a position to gain any experience in psychiatry, there exists a great possibility that in cases of this kind the facts, upon which the professional opinion is based, are apt to be obscured, and are either exaggerated or are not given in their entirety.

All these faulty procedures will occur so long as the final decision is left to the nearest relatives. Should the commitment be made against the will of the family, which as a rule necessitates the compulsory payment of the cost of maintenance, it would seem advisable that this should only be done after a systematic investigation, in which the statements can be depended upon and opportunity is given to the relatives to show why the proceedings are unjustifiable, the decision of the magistrates being given only after an independent and searching examination of the facts of the case.

Although one might naturally raise the objection that when a whole array of evidence is called for, the commitment of any given patient is often in danger of being postponed too long, the fact remains that cases in which the relatives, in spite of real necessity, refuse to give their consent to the commitment are very exceptional. In our section, at any rate, only a very few such instances have occurred in years. Even in these cases the magistrate, by utilizing the provisions of Sections 97 and 98 of the Ba-

varian criminal code, which treat as a crime the insufficient care and protection of the insane, have an excellent means of defeating opposition of this kind. In Section 832 of the new civil code similar provision has been made. Where financial difficulties form the basis for the refusal, a reduction in the costs could be effected.

Finally, it is easily possible to underestimate the dangers which would undoubtedly follow the adoption of a compulsory rule, which leaves the decision to the opinion of a single and often not very capable physician.

Risk to the community arising from the presence in it of an insane person is the idea which generally governs the actions of the officials. The danger from a patient is considered proven so soon as he has committed an act forbidden by the law and punishable thereby. In cases in which these facts have been established by a judicial examination, the commitment of the patient to an institution, without the consent of the family, is ordered without further proceedings. Again, where suicidal attempts have been proven, the decision is made without difficulty. Since it is also desirable to prevent dangerous acts, such tendencies exhibited by the patient supply sufficient grounds under certain circumstances for the institution of a formal inquiry. When one considers that there is scarcely a case of mental disease that could not become dangerous, it is evident that this view of insanity has a very wide significance in every-day life. In point of fact the decision depends, as a rule, upon the estimation whether the danger arising from leaving him at large is greater or less than the evil caused by the infringement upon his personal liberty or upon the rights of his relatives to act for him. It is apparent that in the method of examination errors and contradictions may occasionally creep in. The most experienced alienist is not always in a position to say off-hand whether a patient is or is not dangerous. It happens not infrequently that a patient, who has not been regarded with suspicion, unexpectedly commits a dangerous act, and this is a more common occurrence than the converse. When, however, in spite of all precautions a patient is committed to an institution as being dangerous to the community without being so to the degree conjectured, we must accept this mistake as one of the consequences of our human shortcomings, as we do

in the case of the not less frequent errors that occur in the execution of the law.

The disparity between the length of the process of commitment and the rapidity with which insanity may appear and become dangerous would indicate a shortening of such procedures, limited only by the fear of depriving the individual illegally of his rights. So far as regards the departments in general hospitals allotted to the insane, in which only the most urgent cases are provided for, the methods of commitment are not restricted. In the case of public asylums and even of private institutions, in Prussia and Bavaria, the commitment of dangerous patients is allowed without waiting for the filling out of the formal legal papers. Under such conditions, however, the prescribed forms must be attested within the shortest possible time—in from 24 to 48 hours. This simplification of the commitment process which does not exist in Baden, or, so far as I know, in Würtemburg, must be considered as eminently adapted to the purpose and entirely justifiable, so long as the decision concerning the necessity of such a step is determined by an alienist and the commitment is not made against the will of the family. The time of release from the institution is determined by the physician; or, at other times, the wishes of relatives, who may desire to remove the patient from the institution, before there has been a cure or an improvement, and to make arrangements for caring for him at home or elsewhere, may decide the matter. The assistance of the magistrates, as a rule, is not invoked; an announcement of the discharge, similar to that of the commitment, is considered sufficient. But when once a patient has been placed in an institution on a magistrate's order or when the physician of the institution considers him dangerous to himself or to those around him, or helpless or offensive, in spite of the demands of the relations, his discharge of the patient is only permissible upon consent of the proper officials, which must previously have received the approval of the asylum physicians. Here also the right of the family to decide is limited by the relation of the case to the public welfare. This rule appears to be well founded, since long practical observation gives sufficient evidence on which such a case may be judged.

If the question be asked: How often under the laws regulating the care of the insane in institutions does it happen that

in Germany an individual is illegally deprived of his liberty?—it must be conceded that complete protection against such a danger is not rendered possible by simply limiting the conditions regarding the commitment of patients. The medical testimony is the essential element on which the patient is committed. This testimony can under certain conditions, even if we exclude culpable misuse of this power, lead to the commitment of a patient on the supposition that a dangerous form of insanity exists, when in fact the man is sane or the disease has already run its course. A single personal examination of a case of mental disorder is of so little value that the physician in forming his opinion must often depend upon the testimony of the relatives. Concealment of his symptoms on the part of the patient is so frequent that—despite what has been said to the contrary—the examination cannot always be relied upon. Not infrequently it happens that a correct diagnosis of the condition depends upon the knowledge of certain facts and conditions, as for example, the establishment of the fact that jealousy or ideas of persecution exist. If the relatives deceive the physician on all these points, but the patient shows some faint evidence of physical and mental incapacity, the physician may without any flagrant carelessness make a diagnosis of a mental disease which should be treated in an institution. Longer observation would permit of absolute certainty, but this is often not feasible and is even unnecessary if the physician has made up his mind to his diagnosis and believes the condition of the patient to be a threatening one. The danger connected with this step is similar to that which exists in committing an innocent person to jail for trial. It occurs, however, much less frequently, inasmuch as experience shows that the number of such cases is very small. In 22 years I have seen only two patients who had been wrongly declared insane by the physician. Naturally mistakes are more common in the cases of malingerers held for trial or punishment, who do their utmost to mislead the physician. But since these individuals are anxious to be committed to an asylum, no injustice is done them, if their fraud is rewarded with success. As a matter of fact, few such prisoners are quite sane, the majority being weak-minded, or predisposed to some mental disorder. Even although the medical testimony may be incorrect, it serves to direct the action of other courts in establishing a

precedent no less than if it were correct, so long as the latter do not have positive reasons for undertaking an independent examination or inquiries. Nor could this well be otherwise, inasmuch as the magistrates, who do not know the patient and are not experts, find it impossible in every case of mental disease to institute a careful inquiry into all the conditions, whence they would be able to form an independent opinion. An increase in the number of commitment papers, and notices before the various officials, could never do away with the possibility that a sane person may now and again be committed to an asylum on wrong medical testimony. The only way of changing these conditions lies in the advancement of the cause of scientific psychiatry and in raising the standards of education of the alienist. Unfortunately in the meantime attempts are made to guard against such a miscarriage of justice by the institution of various legal procedures with their contradictory processes and stages of appeal. All efforts of this kind, which tend toward increasing the difficulty of committing a patient to an institution, are based upon a singular disregard of the essential facts of the case. Their authors lose sight of the fact that an asylum is a hospital, and that in the great number of cases the commitment must be made quickly and without hesitation. No alienist would interpose the slightest objection, if in doubtful cases, particularly in those of individuals who offer resistance and whose mental condition is questionable, the magistrate, or still better the court, in taking away the personal rights of the patients should institute, before the commitment to the asylum, the most searching inquiry and should even give the patient an opportunity to defend his rights. By doing this the burden of responsibility that we bear at present might be transferred to other shoulders. On the other side it is our duty to see to it that, on account of the occurrence of a few cases, the many should not be made to suffer, and should not be deprived of treatment and care as a result of attempts to increase the difficulties of committing patients to an asylum. When any one is ill from the plague or cholera, we do not first call upon the court for help, then bring before it complaints, and finally produce the documentary proof that isolation is necessary.

In Silesia, as I remember, on the appearance of a case of insanity the mayor was notified; he then directed the district

physician to examine the patient and pass judgment upon his case. Papers were then sent to the asylum, which added its opinion as to the need of commitment, and the whole evidence was transmitted to the governor of the district who authorized the commitment, after which the papers were returned to the asylum, and thence to the mayor. At last the relatives were informed that the patient could be committed.

I do not know if this interminable process is still in operation. It at least shows us plainly how the most important function of the hospital for the insane—the procuring of a safe and rational treatment for patients—is made quite secondary to the idea that the hospital is above all a prison for the insane. At the same time we see that the attempts to secure protection against the misuse of the power of commitment are futile. One cannot but recognize the fact that all the attempted cooperation of the various officials and the difficulty experienced in the transmission of the papers bearing on the question, whether or not the patient needs treatment in an asylum, have not the slightest connection with the real issue. A judicious decision must always depend on the expert testimony of the physician, and upon this everything hinges. If his opinion is worth nothing, the same is true of those expressed by the head of the asylum and the governor. The only sure protection against the illegal taking away of the personal liberty of the patient lies in the hands of the alienist and the medical officers of the institution.

If we except certain border-line conditions between sanity and insanity, especially forms of weak-mindedness concerning which the views of the most experienced alienists may differ widely, the decision, whether a person committed to an institution is sane or insane, can be made in a very short time. The criminal law process gives us at the most six weeks in which to gain an insight into and to form an opinion concerning the most difficult cases in which attempts are often made to deceive the examiner. The person, who appears sane and is really so, is quickly enough recognized as such. The judgment will be made all the more carefully in proportion as the personal responsibility of the alienist is greater and the less the restrictions put upon him by the detailed character of the commitment papers. When the physician understands that every mistake on his part must be answered for to

the judge, he will, as Rieger has insisted, in every doubtful instance act with the greatest circumspection, and immediately consult the proper officials, whenever the previous history cannot be regarded as reliable and the diagnosis of mental disturbance does not seem to have been made on sufficient grounds. The more skillful the alienist, the less the danger that the patient will be wrongfully deprived of his personal liberty. Of course one must not overlook the possibility that the alienist, not from lack of knowledge or ability but from carelessness or culpable egotism, may keep a sane person in an institution. That such a thing could happen in a public institution in the German Empire is hardly to be thought of. The early recognition of such a condition is almost certain, inasmuch as, in addition to the asylum physicians, other medical men, the various attendants, relatives and convalescing patients, note everything that occurs in the institution. Furthermore, it would be impossible, by the most severe rules, to cut off such a patient absolutely from association with the outer world. Again, admitting for the moment that a head of an asylum, who for many years had satisfactorily discharged his professional and non-professional duties, might possibly be a venal rascal, one must take into consideration the amount of money which would have to be paid for a bargain so protracted and one which, if discovered, would surely place the alienist in jail. The continuous pressure brought by the patients asking to be discharged insures them from being detained illegally through simple negligence.

As a matter of fact one would be much more inclined to mistrust the officers of a private institution in these respects, since the advantages which they derive are more evident. But, here also the great danger of certain detection is a sufficient safeguard from this danger. It must be admitted, however, that in the present state of our code the director of a private institution is less to be relied upon than the head of a public asylum. Protection against the illegal deprivation of personal rights can only be increased by establishing the same standards for private institutional work as are demanded in the public asylums. Naturally private institutions are less open to inspection and they therefore should be made to offer greater guarantees for their trustworthiness.

The fundamental error in the commitment to hospitals for the insane consists in the insufficient distinction between the reception and the formal commitment of patients. It is not the former but the latter which should be surrounded by every safeguard. Every experienced alienist realizes that the placing of patients in hospitals for the insane, even in the case of those who offer opposition, is a comparatively easy matter. A patient, whose condition gives rise to any suspicions of his sanity, will seldom refuse to go to an asylum for a short time for examination or observation. For more than seven years I myself have admitted my patients without any formal commitment. In all this time there was only one instance in which the reception of the patient proved to have been not justifiable. In this case I could not prove any mental disturbance, although medical testimony to that effect was adduced. The patient himself wished for an expression of opinion regarding his condition and was very grateful when I discharged him after having kept him under observation.

Above all, it must not be forgotten that if the commitment of a patient is made more difficult by increasing the red-tape, he will not be saved from an informal imprisonment, which may be much more disagreeable to him than a formal commitment. When a patient becomes excited while with his family, and refuses to go to an asylum, he has to be watched by members of his household, relatives, servants or neighbors, who generally keep him in bed by force, the evidences of which he carries away with him, as we frequently have occasion to see. In favorable cases the patient is sent early to a hospital, where without any formalities he is kept in a small room, until he can be admitted to an asylum. The effect often produced by this form of treatment is evidenced by the communication of a judge, who informs me that he has committed patients to prison, because a stay there would seem to be better than in a hospital. As a matter of fact, in a large number of mental cases, there is a deprivation of personal liberty, which is illegal or at least is enforced often for several weeks without any legal process. This state of affairs is occasioned by necessity. Will any one dispute the truth of the proposition that it would be incomparably better if the patient, instead of being confined in a general hospital, was at once placed amid the surroundings adapted to his case and which are only to be found in an asylum?

The only possible objection is that incarceration in an asylum is a very different affair from a stay in a hospital. The answer to this is that confinement in an institution cannot be avoided in the majority of cases; that there is more at stake than the mere deference to current opinions, and that, in the end, those very formalities, with which one is accustomed to surround a commitment, tend to strengthen the opinion that any one who goes into an asylum must be hopelessly mad. The city asylums will have a favorable influence in breaking down this prejudice. They must—if they are in any way to serve their purpose—make the reception of patients as simple a process as possible, so that they will resemble in this point the general hospitals. The immediate reception and discharge of patients, accessibility to visitors, and publicity of the whole conduct of the institution, will gradually bring light where now "horror of the asylum" reigns.

The retention of patients against their will is quite a different affair from their reception. This question is essentially the one upon which the doubts and difficulties in regard to the asylums depend. If retention is made as difficult as possible in the case of patients who object to it, not only will the public disquietude be allayed, but an act of charity will be done to the alienist. It is the most thankless and repugnant duty of the alienist to be considered, in a measure, the jailor of the patients who resist detention. The means working towards this end are various. First of all, if a patient is to be retained against his will for a certain, even very short, period, the aid of the magistrates is indispensable; they are called upon to form an independent judgment of the justice of the retention. Added to this there must be the affidavits of witnesses based upon the facts in the case which have led to the retention of the patient, together with testimony as to the medical phases of the case, and also an independent expert opinion. Herein lies the great difficulty. As a rule the district physician, whose education is utterly insufficient to enable him to form an independent opinion in regard to difficult psychiatric problems, is called in, and herein the long neglect of the study of insanity becomes painfully apparent. The older municipal physicians have had scarcely any training in this line, and on account of the responsibility put upon them and the great weight which

their opinions under certain circumstances carry, the great need for their better instruction has become apparent.

In Prussia and Hesse of late certain prescribed courses have been introduced, which will certainly produce favorable results, and this plan seems to be well worthy of imitation. Even more practical, but necessitating the giving of a longer period of time to study, are the requirements in Baden and in Saxony, to the effect that every municipal physician must give evidence of several months of practical work in an asylum. Should the examination be made adequate and be held by a capable expert, it is to be hoped that this evil—that the standard demanded of the State from its physicians has hitherto been much too low—will gradually be remedied. A second precaution against the possibility of illegal retention is to be found in the supervision of institutions by magistrates and medical experts. This to a greater or less degree has been put into practical operation in nearly all institutions. At least several times in the year, especially in private institutions, it should be possible for every patient to have his complaints thoroughly investigated by a committee one of whose members should be a thoroughly experienced alienist. Of late in Prussia the aid of such an expert has been arranged for, and in Bavaria also except when the difficulties are too great. It is a matter of little importance whether this expert is connected with an institution or not, since, although in the first case he might be much more independent, in the latter he would be capable of appreciating more fully the practical needs in the care of the insane. In either case, however, he must be an experienced and practical man, and one conversant with all the essentials of the work. If in addition to this, all complaints in writing from the patients regarding their treatment and retention in the asylum, no matter what their tenor, had to be transmitted to the supervisory board, about all that would appear to be necessary to preclude the possibility of wrongfully depriving a patient of his personal liberty would have been done. It might, however, seem advisable to add the measure adopted in Bavaria, that the State's Attorney should apply for the power to take away the legal rights of any patient who has been detained for more than six months in an asylum against his will, and thus force a legal decision as to his condition. Thus, in every case of confinement for a longer

period the opportunity is given for an examination of the facts before the court.

The helplessness of the insane and their need of protection make it necessary that the State should pay some attention to their condition, even when they are not dangerous and do not demand institutional care. In general it would be practical to leave such patients to the care of their families and not to interfere unnecessarily with them. Only when the patients are not able to withstand the struggle for existence, and all other aid has failed, does it become a public duty to give aid to the feeble, in order that an aggravation of their mental disorder and an increase of suffering may not result from their poverty. The task of solving these questions belongs to individuals rather than to the magistrates. They can only be dealt with properly by the various philanthropic associations, since a thorough knowledge of the conditions under which the patient lives and a choice of the means to be used are necessary. The participation of the charity organizations and their representatives in this kind of work is to be emphatically commended. Experience has shown that these bodies have done excellent work in the care of the insane outside of institutions, their efforts having been especially useful in caring for discharged patients. The State has every reason, as in many instances it has already done, to aid the unpretentious but sterling work of these societies.

Scientific observation and experience form the firm foundation upon which the whole question of the care of the insane is based. Every step forward—and many steps backward—in the care of the insane, are more or less closely related with the medical conceptions regarding the existence and the causes of insanity. As in every branch of medicine, it has become more and more the duty of the State to foster scientific investigations in the Hospitals for the Insane. In this respect psychiatry has long enough been treated as a step-child. Although our old asylum physicians afford brilliant examples of what can be accomplished with very inadequate means in the attainment of high scientific ideals —and that too, despite the daily claims made upon their energies in the care of their institutions—the State has only recently recognized that a healthful progress in the care of the insane is not possible without a continuous development of scientific work. The

first psychiatrical hospitals devoted to science and to instruction were built in Baden; only slowly have the other German States followed this example. Even today in a number of German universities a neighboring asylum takes the place of such a hospital. The essential inadequacy of such an arrangement is only too evident. The direction of an asylum demands the full power of any one man, since the medical and general supervision are combined and must be undertaken by the same person. But the duties of the investigator and teacher claim, or at least should claim, his undivided attention. The union of the duties of a professor with those of the superintendent of a great institution is an impossible combination. Either the care of the institution or the work of the professor, or more probably both, must inevitably suffer by the arrangement. On the other hand, the solution attempted in Erlangen, by entrusting to different persons, under the same roof, the direction of the asylum and the office of professor, must sooner or later give rise to difficulties of a personal character. It is true that our earlier professors were really directors of institutions, but it must be remembered that at that time the claims made on a scientific institution and the clinical work were quite different from those of the present day. In the last ten or twenty years it has become impossible for a man to fill the position of professor by simply devoting a few hours to lectures or demonstrations; investigation and teaching must be, as in all other departments, widely prolific, stimulating, creative and constructive. Only by such a conception of and devotion to the duties of the academic calling— impossible when hampered by the direction of an institution—can be developed a psychiatrical science in any way worthy of the other branches of medicine, which are growing under much more favorable conditions. It is certain that the scientific activity of institutions will always be essentially different from that of the teaching hospitals on account of the immediate connection of the latter with other scientific departments and the fact that they are always kept full of fresh blood by students anxious to increase their knowledge. When the clinics are unfruitful, the asylums as a rule are even more so; but when a fresh scientific life prevails, the influence sooner or later is communicated from the clinic to the institution, both being more or less closely related.

For these reasons, therefore, it is no mere luxury but an absolute duty that the State should, as far as possible, create for psychiatry scientific centers, which may influence the development of this department. That a definite advance has been made in this direction there is, fortunately, no doubt. Whereas the first teaching hospitals for the insane both in the plan of their foundation and the manner in which they were conducted, showed the stamp of the asylum, although on a more adaptable but smaller scale, those of most recent date, especially at Würzburg and Giessen, are much better equipped for the purposes of scientific investigation and instruction. In the building plans of the Heidelberg and Freiburg clinics, the space set aside for scientific work is very small. In fact it consists merely of a room for microscopical work, with which one meets in the ordinary asylums. It has been only with the greatest difficulty and thanks to the substantial aid given by the government, that additional space has been set aside for the most important work of the clinic, as well as for scientific investigation. One has only to compare the commodious rooms for anatomical, psychological, chemical and photographic work in the Giessen clinic, to recognize how widely the views concerning these things have changed in the last 20 years. The clinics in Baden show traces of their development from the asylums. They are simply members of the general organization intended for the care of the insane and as such are encumbered with a routine which renders difficult the accomplishment of their scientific and teaching duties. They have to bear the ever-pressing necessity of taking care of all the patients of a certain district until a place is made for their reception in an institution. Hence it follows that instruction and scientific investigation, which should be the first duty of the clinic become subsidiary to that of taking care of the insane patients for the State. Nay more, patients who simply require nursing and for whom all treatment is of no avail, overcrowd the clinics. This distressing condition occurs in a clinic where an example of good management should be set to those who are studying to become physicians. Finally, it must follow that the students are shown how things should not be, and they see how unpleasant is the teacher's task.

Again, the dependence of the insane upon public aid and the

pernicious overcrowding of the clinics leaves but scant room for those patients—for example, idiots and border-line cases—who, while not in need of the special care which can be obtained in institutions, are of great importance to the clinic for purposes of study and investigation. Consequently, an abundance of clinical material which would be especially important for teaching purposes is not utilized or studied, and the very cases that are so often met with by the general practitioner are scarcely ever seen in the clinic.

All the above-mentioned deficiencies could be overcome if once and for all the psychiatrical clinic were to insist that it should be utilized as an institution for investigation and teaching just as is every other medical department. No one would presume to direct the head of a medical or of a surgical clinic as to the kind of patients he should accept or reject. No one should demand of the psychiatrical clinic that it should receive patients who are not adapted for the purposes for which it was designed or that these unfortunates should be cared for there, to the injury of other still more important interests. It is indeed an extravagant experiment to expend money in ways for which an institution is not adapted and thereby cheat the public out of the highest service which could be obtained by its proper use. And yet this is the inevitable result of carrying on a department without regard to the proper standpoint, but simply in accordance with views which are foreign to its purpose.

These errors are the remains of "the asylum period." In time and under the pressure of circumstances they will certainly be mitigated. Fortunately, they can be avoided by the building of new clinics. The clinics in Strasburg, Tübingen, Halle, Giessen and Würzburg have the right but are not bound to receive patients, and they enjoy in addition the very great privilege of having free beds, so that patients suitable for the clinic can be drawn from any district. With respect to rules limiting the reception of patients, they enjoy the greatest latitude, and therefore can take in patients as the clinic needs them. They all have the power to accept whatever patients they choose. It is to be regretted that the State which founded the first psychiatrical clinic still stands by the conditions adapted to those times and has allowed other countries, to whom it has set the example, to outstrip it.

With the founding of psychiatrical clinics and of the psychiatrical professorships the study of insanity has been recognized as one of the independent medical departments of the university. The final step in this direction would be the introduction of psychiatry into the State medical examinations. In the latest scheme for these examinations, however, one meets with the extraordinary statement that the physician is examined, not in history-taking, diagnosis, prognosis, etc., of a case, but that knowledge only is demanded "which is necessary for the practising physician." What profit can be derived from the study of a clinical science by a practising physician, if he does not know how to apply this knowledge? Possibly the answer to this question is known only to the examiner! It is surely necessary that the same standards should apply in the case of the clinical teacher of psychiatry as are adopted in other departments of medicine. Too often, however, this is not the case. One of the greatest obstacles to scientific psychiatry lies in the fact that the chairs of Mental Diseases in Universities are held by asylum physicians, who show not the slightest evidence that they are equal to the scientific and pedagogic duties of their position. In earlier times, when prominent alienists were sometimes found in the asylums, one might meet with a Gudden, a Hagen and a Damerow. But today, although we have a goodly number of clinics, it is an evidence of extreme shortsightedness that the scientific and teaching powers are not the measure of the ability to instruct, so much as the capability to manage an institution. By chance, here and there, we meet with a fortunate selection. In general it is apparent that a man who has the inclination and ability to assume the duties of an investigator and teacher is more apt to devote himself to the work in the clinics rather than to that in the asylums. Investigation and teaching is above all an art for the practice of which not only a natural talent but also fundamental training is necessary—one which without doubt can best be obtained in those institutions which were planned for this purpose. Even now in half of the universities the chairs of Psychiatry are held by men who have had no experience in teaching and who have never done anything to advance our psychiatrical knowledge. These conditions are due to the present combination of clinic and asylum which so often exists—a combination for which no excuse can be offered.

One often complains, and justly so, of the limitations and the slow progress made by our science. One of the chief sources of the error is the general disregard of the fundamental essentials of scientific progress. Can any one wonder at the great discouragement which exists in academic circles, if the most honest scientific endeavor, the most successful and most diligent work is thwarted by "administrative doubts," which would rather give the teaching position to an asylum physician who happened to be in the neighborhood, than to a young clinician scientifically qualified for the place?

For a long time I have felt myself in duty bound to discourage every colleague coming to me who thought of becoming a teacher of psychiatry, because, as things now stand, failure is almost certain. In point of fact, the men of the greatest capabilities, in spite of the many attractions offered by psychiatry, turn to more profitable fields.

Whether this condition of affairs can be regarded as fortunate for the State, which is in sore need of teachers as well as investigators in psychiatry, I leave to the serious deliberation of those whom it may concern.

The calling of the alienist is indeed a hard one, for although the general scope of the work is not as large with him as with the busy general practitioner, the high-pressure and strain under which the alienist works bring their own peculiar difficulties. The constant association with cases of mental disease, the daily glimpses into the frightful destruction which insanity causes, the constant fight against dangerous and terrifying evidences of the disease, the helplessness of medical aid, and, last of all, the inadequacy of our scientific knowledge lead in time men, who do not possess a very resistant and elastic nature, to a mental sensitiveness—which generally expresses itself in nervousness, hypochrondriacal moods, insomnia, an inclination to misuse drugs—or to a certain benumbing and indifference to the higher claims of the profession, a neglect of further training and the search for trivial diversions and outside employments. These results, which appear, it would seem, more often in asylums than in other hospitals, necessarily strongly influence the whole character of the medical work. Above all the isolated position of so many

asylums favors these conditions, precluding, as they do, almost completely every form of high and stimulating influence.

A further disadvantange is to be found in the overworking of the individual physicians. When a man is obliged to visit twice a day and care for 200 or 300 patients, read their letters and take the history of their illnesses, he is perforce compelled to dispatch his duties superficially and even then he cannot expect much time for reflection. The heads of institutions, who form as it were the natural central point for all assistant physicians and who out of their ripe experience should stimulate the interest of those around them, are also so overburdened by their executive duties that they often carry out imperfectly the medical supervision of their patients, not to mention their failure to devote time or to find pleasure in the supervision and direction of the younger physicians. If we remember that at present more than half the assistants in institutions enter their profession without any particular training in psychiatry, and furthermore that many take up this career not from preference, but by mere chance and also on account of the comparatively good pay of subordinate positions, one can understand that our profession staggers under a heavy burden, often too heavy to be borne. In independent intellectual activity and the high conception of the aims of our calling, springing from it, are to be found the only means by which the worker may be aided in the hard battle of life and in the struggle against the exasperating and deadening petty annoyances of his daily existence. Even although it cannot be the chief duty of the asylums to encourage scientific investigation, nevertheless the constant striving towards the continual expansion of our knowledge and powers affords the only force which in a measure atones for and counteracts the strain of the day's work upon a man's mind.

We have always had, and still have today, a number of asylum physicians, who in capability and in their practical and scientific work rank with the most distinguished men of their specialty. The example of these men shows how successful the work of an alienist can be, if his own strength and better environment make it possible for him to work with higher ideals.

The State will, therefore, according to our way of thinking, be richly repaid, if it aid in every way the attempts of the asylum

physicians to do scientific work in addition to their ordinary routine. It would be beyond the scope of this communication to mention the different ways open by which this end could be accomplished. Various courses of study and State aid to enable the asylum physicians to travel are essential; and both these means of improvement are now granted to asylum physicians in several Prussian provinces. In this way fresh life is always introduced into the work done in asylums. A leave of absence for the head of the institution, as well as for the other physicians connected with it, should also be granted, giving ample time for rest, recuperation, study and renewing of interest in the work. No institution should be niggardly in supplying books and all the aids to investigation, especially if the Board of Directors appreciate that knowledge and mental development, which attend unhampered work, yield rich reward in benefit to the patients. Nothing can be more foolish than the conception that research work takes the doctors away from the care of the patients. It is the scientific study more than anything else which makes the physician perform his work with his whole heart. Experience in the past has taught that those institutions were always the best, which had the most scientifically capable and progressive directors, for the reason, among many others, that they were able to attract the more capable younger physicians.

A serious hindrance to the healthy development of the work of asylum physicians lies in the increasing tendency of different countries and provinces to isolate themselves and also to reward length of time in service rather than capacity. This inbreeding tends towards smothering all aspirations and makes all indifferent. It is indisputable that free competition produces results that are not acceptable to all. A better example is found in the universities whose intelligent officers fight this inbreeding by every available means and have demonstrated that the best possible results are attainable only when a position is given not to the one who is next in line, or to the oldest, but to the worthiest. The narrow-minded and strict adherence to a certain policy leads necessarily to the result that the positions are not open to competition, but are simply held by right of possession, since the standards afford no test of capacity for work. The consequences of this regular method of advancement, the promotion of the in-

capable along with the capable, the stifling of every high ambition, the drifting into a state of lazy inertness, are conditions which always exist and outweigh the advantages gained by the introduction of fresh blood and new ideas. The personnel of the staff thus remains a fixed quantity for years. The country that understands its own good will choose the most capable workers no matter whence they come. What matters it if by so doing some incapables, even though they be compatriots, be rejected because they are unable to withstand the competition?

A marked improvement in this condition of affairs will be brought about if the enlargement of city asylums is carried to a greater extent. Today these institutions suffer particularly from the limitations that at present surround the career of the alienist, who feels the necessity for an increase in his scientific education. The physicians in the clinics and small city hospitals make the greatest material sacrifices to gain this end. To one of the needs of our profession I would call attention. It is an indisputable fact that young physicians who have spent some years of their life on insufficient pay in the service of a psychiatrical clinic, even though possessed of the proper qualifications, meet with the greatest difficulty as soon as they try to find positions, "out of the order of regular promotion," but suited in a measure to the experience and qualifications they possess. This was not always so. Fifteen or twenty years ago scientific capability was considered a greater qualification for the position of head of an asylum than the mere right of possession. Today those physicians who prefer to take, from the beginning, the much better paid positions in asylums, instead of seeking scientific advantages, are incomparably better off so far as their material career is concerned, than the most capable clinical assistants—a condition contrary to those which exist in other departments of medicine. The founding of city asylums will open up a new career for the clinical assistants, a career for which they are in every way prepared. These assistants, who now have no outlook for the future, would then be able to give to the clinics and the asylums their varied and best powers, and would thus cause a revival of clinical work which would bring results productive of much public benefit.

Finally, I would call attention to the fact that the salary of the head of an asylum is not an adequate return for the difficult,

thankless and responsible work performed by him. The isolation of his position away from the educational centers, where he might participate in the intellectual life and thus obtain a relief from the monotony of his daily tasks, demands from him a proportionately great sacrifice. The comforts of a home and the establishment of a family are for him necessities, without which the burden of professional life for any length of time would be almost insupportable. Notwithstanding this, as Hoppe has shown, even those members of the Medical Staff of Asylums who have attained the highest aim of their ambition, the topmost rung of the asylum ladder, receive a salary that in most cases does not exceed that of a magistrate of the lower court.

To stand still is to fall behind! In the conduct of the affairs of an asylum the pressing demands of the day do not allow us to rest upon the laurels which we have already won. New questions arise and the solving of old problems constantly demands new expedients. The needs of the care of the insane in our community have grown to an extent which compels us to discover ways and means by which the evils can be met most efficiently. Preeminent in the foreground must stand the education and the maintenance of a capable and trustworthy class of alienists, since this class alone is able to weld and wield the weapons in the battle against the menace of Insanity. The coming doctor must receive both education and stimulation in the clinics, which must be made equal to this task by the provision of all the necessary facilities and by the careful selection of leaders, who will see to it that these places become fruitful and creative nurseries of science. Conscientious cooperation of clinics and institutions will bring us, then, gradually nearer to the solution of those great questions which we encounter at the beginning of every fight against suffering and illness—the seeking out of the cause and the nature of the pernicious influences which convulse and wreck the minds of men. From knowledge gained in this way we shall at last attain to those vantage points of view from which we can the better direct the struggle to prevent as well as to cure insanity. For more than 100 years the alienists have been busy in their self-sacrificing work, trying to cope with their increased duties connected with the care of the insane. But again and again the greatest internal and external difficulties have arisen, which have

interfered with the carrying out of this work which is of such vital importance to the community. The intrinsic difficulties in our profession we can only master by our own efforts; to clear away the external hindrances in the way of development is the duty of the State. The State will best serve its own interests when it strives to give us those conditions under which our work can best prosper.

ON THE CLINICAL STUDY OF PSYCHIATRY.[1]

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The development of modern medicine is most intimately connected with the great advances made in pathological anatomy. Hence it was only in accordance with the spirit of the time that in every field of medicine decided progress was expected, mainly along this line of research. Psychiatry was affected by this spirit in a peculiar manner. Many of the best investigators directed their energy towards microscopic studies, but the conditions under which they worked differed from those existing in general medicine. Here the field had been prepared by good clinical analyses, furnished more especially by the great French clinicians. These had rendered possible the intimate relation between clinical and pathological-anatomical studies; but in psychiatry this was not the case. Moreover, the methods of pathological-anatomical study were still very imperfect. For these reasons the attention of psychiatrists came to be directed more and more towards the more promising problems of neurology, and clinical psychiatry received no new invigorating impulses. Even the attempts which were made in the right direction were not sufficiently appreciated. Only this can explain why Kahlbaum's work should have had so little influence upon the general development of psychiatry.

In recent years, however, I think we may fairly say that the general attitude is changing. Without neglecting pathological anatomy, alienists are laying more stress upon clinical psychiatry, and the studies in this subject are undertaken more from the standpoint of general pathology.

While many indications pointed to such a change in attitude, and many workers in all countries contributed towards it, we

[1] Read at the meeting of the American Med.-Psych. Association in Richmond.

must, nevertheless, regard Kraepelin as the most aimful and consistent reformer. He has shown us lines along which work can be done to bring more clearness into the subject. He has attempted to place the study of psychiatry on a more rational basis.

Convinced of the soundness of the general tendency of his method, we have endeavored at the McLean Hospital to study mental diseases from the standpoint of general pathology. In doing this certain ideas and principles have gradually taken shape and have guided our work; and it is these which I wish to present to you.

We have heard a great deal about classification in psychiatry—more than is desirable—and yet it was natural enough that attempts should be made to group the varied conditions which presented themselves; indeed, this is necessary not only for practical purposes, but especially for purposes of study. But when we attempt to classify, we must be clear with regard to our possibilities as well as our purposes. Of the possibilities and principles we shall speak presently. So far as the object is concerned, it seems to me that the most important *raison d'être* for a tentative classification such as we may expect at present is its methodological purpose. We should attempt to bring together the different materials which should be studied in conjunction, that is, cases a combined study of which is calculated to advance our knowledge of the manifestations of these diseases. We see that it lies in the very purpose of the classification that it should be tentative and flexible.

Much depends, of course, upon the standpoint from which a classification is made, and the standpoint of the physician naturally differs from that of the psychologist. The physician's final aim is to arrive at diseases, while the psychologist merely seeks for deviations from normal functions. These deviations are symptoms, but not disease entities having their special cause, special course and their special lesions and combinations of manifestations.

In the great mass of conditions which we see, the variations in every respect are so great that we must assume different disease processes which give rise to these variations.[2]

[2] I am, of course, aware of the fact that we cannot speak of processes in all conditions of mental aberration; but that we are frequently dealing

But while we infer the existence of different diseases, we have little knowledge of their real processes. Indeed, such a knowledge seems to be very remote; but what are accessible to us are the manifestations of these processes with all their great variety of differences. It is just here that we are at once confronted with the greatest problem, *i. e.*, which of these differences are essential and which are not. Although general pathology and psychology furnish some data which will aid us in attacking this problem, we must admit that in the present state of our knowledge these are not sufficient and we must look for other assistance. In order to state the problem more clearly, let us take a definite example from mental disorders; for instance, a group of cases which would ordinarily be classed under melancholia. Some cases will show agitation, some retardation, some simply depression, others again, other traits. In some cases the affection seems to be connected with a cause. Some show a tendency to recurrence, others show no such tendency. Some patients deteriorate, others do not, and even in the manner of deterioration differences may appear. Again, the pathological-anatomical alterations may differ, and if we should make chemical studies, perhaps there again we might find distinctions. Here, then, are differences enough; but which of these are important and which are not? How do we know that the fact that one case of melancholia shows, let us say, inhibition, another agitation, and so forth, is at all essential; or that the fact that one deteriorates and the other does not, necessarily means that the two cases represent different diseases. Or how do we know that certain pathological-anatomical changes are possible only in one disease and not in another? On the other hand, how do we know that the most heterogeneous symptoms or disease-curves may not belong to the same disease, and that variations, which seem to us at first glance to be so great, for systematic purposes may not be unimportant? Thus, an excitement, a confusion, a depression, or a chronic and acute course, may well be the manifestations of the

with developmental arrests or developmental peculiarities; indeed, it may at times be difficult to say which of these two types we have before us. The former are, however, the more frequent. Moreover, a study of them more especially forces upon us a general pathological standpoint. This paper, therefore, treats of them alone, though I do not see that the manner of study of the two should materially differ.

same process, and we know what possibilities lie in differences of intensity. So we see that wherever we look we are confronted with the same difficulty, namely, that of deciding what is essential and what is not.

Now the conception of disease processes will come to our aid, for this alone puts before us the general pathological problem. It helps to unite all the different sides of a case into one whole, and leads us to a consideration of all the manifestations; for it is evident that if we desire to arrive at a postulated disease process, we shall not take into consideration one group only of the manifestations, and certainly not when we are convinced that our knowledge of this group is insufficient and when we do not know upon what to base our differentiations. The error of overlooking this was made, for example, in the purely psychological classifications, such as the older ones, of the diseases of the feelings and those of the intellect, as well as in a recent attempt to build up a system of psychiatry upon association psychology. The same may be said about the etiological classifications.

If, however, we take into account all the manifestations of the disease process, we are actuated by the best guiding principle that is available to us at present. We must aim at a careful analysis of the data of each group of manifestations, note distinctions and make these the object of our special study; but whether these are really essential or not, only a general study of all the manifestations will teach us. We have not sufficient reason, either of a psychological or of an anatomical nature, to recognize differences in manifestations as *a priori* essential; nor is our knowledge of cause, course and outcome adequate to this end.

To illustrate the method, let us make two large groups of cases, one ending in dementia, the other in recovery. Do these two groups also show common traits in the symptoms or in the course, or cause, etc.? Perhaps we should find that this is not the case and that we can make better groups according to the symptoms. When we analyze these we may find that our first large groups, based on the presence or absence of dementia, have to be subdivided into smaller groups, which show differences in the kind of dementia. Or our study of symptoms may reveal to us well-defined pictures in cases which may or may not deteriorate. This would lead us to re-examine our conception of deterioration,

to see whether, even as a special kind, it is an essential feature. If the limits of the paper allowed, we might continue and bring in differences in the disease curve, or in the cause, or in the pathological-anatomical alterations; but this is hardly necessary. What I wished to indicate was the general principle, which may now be stated as follows: the postulated disease processes, we can at present only study in their manifestations. These manifestations may be divided for practical purposes into different groups, namely, the cause, the disease curve or course, the outcome, the symptom-picture, the pathological-anatomical changes, and finally, perhaps, such things as chemical alterations. The conclusions which we draw from these groups of manifestations must be allowed to influence each other according to the value which each deserves, so that the final conclusions are the result of the entire analysis.

From all that has been said the importance of clinical work to the extent indicated is apparent. Only when this is carefully conducted are we prepared for studies in pathological anatomy or pathological chemistry; and only then will all these different studies mutually support each other and lead us in an aimful manner to a clear recognition of the real diseases. For these reasons also it seems to me that the general, otherwise very creditable, movement in this country towards the establishment of laboratories in insane asylums is somewhat misguided and may do a certain amount of harm. We have been severely censured for our lack of interest in scientific questions. The establishment of a laboratory may give us the feeling that we have sufficed to all scientific needs, although the observation of the patients may be as unscientific as ever.

Having delineated the general attitude to be adopted, I purpose to speak somewhat more in detail of the different manifestations, with a view to indicating the more important features and to showing along what lines it seems possible, to a certain extent, to separate the essential from the non-essential. It is clear, however, that only a somewhat cursory treatment can be given here to this part of the subject.

We may be pardoned if, for practical purposes, we class the cause among the manifestations of the disease process. We all know how important the etiology is in the question of circum-

scribing diseases, for disease entities are etiological entities. In psychiatry, however, even more than in the other fields of medicine, the fact has often been overlooked that a noxious influence preceding the outbreak of a disease is not necessarily its cause. But all such influences should, nevertheless, be an object of our study, for though they may not represent essential causes themselves, they may point out the way to a clearer understanding of them, as they may be more or less closely connected with them. What we must, however, rigorously require of an essential cause is that it has given rise to a definite disease picture and that this same disease picture cannot be produced by anything else. Unless this relation of cause and effect is proven, purely etiological groups are not justifiable. From what has been said above, it is clear that by disease pictures we do not imply a certain combination of symptoms only; but conditions which our study of symptoms, course and outcome, and, if possible, pathological-anatomical lesions, show us to be consistent with each other.

On the other hand, though certain influences may prove in many cases to only favor the outbreak of various diseases without being their essential causes, yet these same influences may deserve in other cases a much greater weight or be directly essential causes. This seems true, for example, with regard to alcohol, the puerperium, and the climacterium. We cannot deny then that our knowledge of strictly essential causes is meagre; but if etiological factors are to be of assistance to us in circumscribing diseases we must be clear about their true value.

While these general remarks may suffice to indicate briefly the treatment of etiology, we must speak somewhat more at length of the course or what may be called the disease curve and the outcome. In spite of the fact that only a thorough knowledge of the disease processes with which we are dealing would furnish us with the necessary data from which to decide with certainty what is fundamental, we must nevertheless at every stage of development strive to single out those features in course and outcome which seem especially important and elementary.

To a certain extent it will be necessary to treat course and outcome conjointly. The first conceptions regarding the disease curve which suggest themselves are those of acuteness and chronicity. In an analysis of these we shall be led to a discussion of the

main points of our subject. Acute and chronic are terms which in the common usage are by no means clear or sharply defined. We speak of a disease as acute when the symptoms are very pronounced and at the same time the disorder is of a rather short duration, while we speak of a disease as chronic when the symptoms last for a long time, no matter whether they be intense or slight.

Why are these conceptions not sharp and not well adapted for our purposes? For two reasons, I think. In the first place we combine two elements in the terms—that of intensity and that of duration—sometimes laying more stress on the one, and again more on the other. In the second place, we meet here with an old fault, namely, the tendency to regard mental disorders too much from the purely symptomatic point of view, rather than from the standpoint of the disease process. To make this clear by an example: When in neurology we speak of an acute anterior poliomyelitis, in spite of the persistent "chronic" symptoms of palsy, we are using the term "acute" with reference to the disease process; yet the same is often not the case in mental diseases. Here we speak of chronic melancholia or chronic paranoia in cases which just as little deserve the epithet chronic as referred to the process as does anterior poliomyelitis. On the other hand, we speak of an attack of insanity as acute, which later proves to be merely a short phase in a process showing a constant tendency to return without external reasons, as is the case in epilepsy, a disease which we unhesitatingly call chronic. While for practical purposes these inconsistencies are of little consequence, they must be avoided in an analytical study of disease processes. We see, therefore, that instead of the present conceptions acute and chronic, we need conceptions referring either to intensity or to duration, and referring either to the symptom picture or to the disease process, for we have seen that permanent symptoms may simply be the outcome of an irreparable lesion once established. These terms then lead us to a consideration of the intensity and the duration of the disease process on the one hand, and to the question of permanent alteration on the other. At present the intensity is the most difficult of these three factors to study. On the one hand we may often be doubtful about the greater or lesser intensity of symptoms, and the conclusions to be drawn there-

from as to the intensity of the disease process. On the other hand, experience teaches us that intensity varies within such wide limits in diseases which we must regard as entities, that it seems impossible as yet to state what is essential and what is not. But one point should be especially dwelt upon, namely, the fact that some attacks of insanity may be so intense as to lead to death. Such cases have been erroneously classed together under the name of delirium acutum. It seems that we have here a feature which is not common to all diseases; but one which probably depends not upon the intensity of the process alone, but possibly also upon its destructive character. (See below.)

By duration we mean the extent of the disease curve. We now have to decide whether there are any distinctions to be found here which are important. Arbitrary lines have sometimes been drawn between acute and chronic, when these terms were used with reference to duration. This was done for statistical purposes. But for our purposes this distinction is not only impracticable, but also inadequate. Again, in order to draw conclusions from the symptoms with regard to the process we must avoid the error of confounding signs of permanent defect with those arising from an active process. This is often impossible, and hence we must seek for criteria which avoid these difficulties. Fortunately we are not left without some aid. We find that disease processes of long duration show a decided tendency to fluctuations. These fluctuations show themselves in remissions, late exacerbations and recurrences, terms between which sharp lines cannot be drawn. Of these, general paralysis supplies us with good examples. We all know that a case of general paralysis may present a decided remission after an acute onset. The patient may recover so far as his symptoms are concerned, and such a remission may last for several years. We do not, however, say that he has recovered, because we know from experience the inevitable tendency of the disease to recur. Moreover, we encounter the same phenomenon later on in the course of the disease. A patient may have slowly deteriorated; then an exacerbation may occur, after which there may also be a remission. In this case, however, the patient is not well, though he may return to the level on which he was before. But more than this, we not infrequently see demented patients in whom for months

there is no progress. Such a condition also probably represents a real remission. Here again, then, we have to differentiate between symptoms and process, since it is probable that an arrest in process need not show itself in a diminution of symptoms, but simply in a lack of progression. The same tendency to fluctuation is seen in other diseases, as tabes, Graves' disease, chronic arthritis, epilepsy, etc., and we find, therefore, that this is a very common feature. In other disorders, when the cessation lasts longer, or when the process is not of a progressive character, we speak of recurrences. But in both cases the common trait is the tendency of the process to return without any external reason. Now it is just this tendency which appears at present to be the most important feature in the duration of the process. It is this which seems really distinctive, and whether processes lead to permanent loss or not, the tendency plainly manifests itself, either by recurrences or by exacerbations. Hence we would make the distinction between diseases which tend to recurrences and those which show no such tendency. If we wish to retain for our purpose the terms acute and chronic, it would be well to restrict their use to these conceptions.

This brings us to the last of the three elements included in the terms acute and chronic, as they are commonly used, namely, the tendency of a disease process to lead to irreparable defect. This has nothing to do with the tendency to recurrence or with the intensity of the process. For we see on the one hand, disease processes constantly reappearing for years without leaving behind any signs of deterioration; while in other cases even mild attacks may leave the patient permanently and seriously damaged. Hence we conclude that this tendency is a special characteristic of some disease processes, while it is not associated with others, and that it is independent of the other factors of which we have spoken. We will call this the destructive character of the disease process. Hence we find, for example, that the process of general paralysis is at once chronic in our sense and destructive—chronic because it shows constant fluctuations and tendency to recurrence; destructive because it leads to permanent alterations. These two elements combined produce progressiveness.

But we must not forget that we are dealing with processes

which probably differ widely in nature, and therefore, while these factors are undoubtedly of some importance, we must yet learn their modifications and the real laws which govern them in different diseases. The cases will have to teach us how long remissions may last and whether their extent differs in destructive and non-destructive processes; whether recurrences are in all diseases as inevitable, as in general paralysis, or whether there are diseases which in most cases, though not in all, may show the tendency to recurrence; and finally whether the destructive character necessarily shows itself after the first lighting up of the process, or whether one or more so-called attacks may pass over before it becomes manifest. Thus it seems probable that not so much the inevitable reappearance of a process as the general tendency to reappearance is characteristic of a group of cases which show otherwise common features, and that the general essential tendency to dementia is characteristic rather than the inevitable dementia after the first attack. All these questions will have to be settled by a correlative study of other manifestations in long series of cases. But the nucleus of a group of cases must naturally be formed by examples which show such features in a much more schematic manner. It was in this way that the conception of circular insanity, for example, led to the present conception of manic-depressive insanity, the evolution of which is one of the most brilliant achievements of the Heidelberg school.

We have spoken in a general way of dementia, understood in its clinical sense as irreparable defect. We shall now speak of dementia in its psychological sense. We see different varieties of dementia. These may represent differences in degree or differences in nature. The dementia of the advanced paralytic, for example, presents a picture different from that of the early stages. May not the same simple differences in degree exist in all varieties? Of course this question can only be answered after we have found out whether these differences in dementia agree with differences in other respects, and whether special disease-pictures always lead to one and the same form of dementia in which, irrespective of degree, certain elements exist and others are wanting. If that is so, the study of the terminal stages represents an important field for our work. The outcome is then not

only important so far as the tendency to deterioration, but so far as the kind of deterioration is concerned. I think that in a general way this qualitative difference actually exists, and consequently a study of the symptom-picture of the states of permanent defect will be of great assistance to us in the attempt to circumscribe diseases. The common outcome into a clearly analyzed form of dementia may perhaps show us that clinical pictures which still appear to us to differ, in reality belong together. It seems to me that we have here a fruitful field for experimental study, for a careful analysis by means of tests of the elements which make up these states of deterioration. This is especially feasible, since often enough we find patients with mild degrees of dementia well adapted for such study.

Unquestionably the most important manifestations are the mental symptoms, and they of course deserve the most accurate study; but the difficulty in distinguishing between the essential and the non-essential is even more apparent in this than in any other group of manifestations. It is well to say at once that the attempt to make this distinction on the basis of normal psychology has not been successful. Thirty years ago Kahlbaum pointed this out, and although the psychology of to-day differs from the psychology of that time, what he said then is, nevertheless, still true. While then it seems impossible at present on the basis of normal psychology alone to arrive at fundamental symptoms, and while we cannot even be sure whether different diseases have necessarily fundamentally different symptoms, it appears wisest to proceed entirely by induction. It will be necessary to establish differences between superficially similar symptoms and syndromes, differences which have to be further and further analyzed and reduced to finer distinctions. In this work the results of studies in normal psychology will of course be of the greatest assistance to us; but it cannot be too strongly insisted that to make any system of psychology, in its present stage of development, the basis of our studies is likely to lead us astray. The psychiatrist must furnish his own problems, in the elaboration of which the data and the methods of normal psychology, as well as his own methods and his own results and experience, must be used. Moreover, it must never be forgotten that the very changes which we are studying are themselves qualified to throw

much light upon many obscure questions of psychology. If this more independent course be taken, psychiatry will be of much greater service to psychology, and the mutual dependence of the two studies will be established on a much more reasonable basis. Not aprioristic psychological notions, but studies on patients, will have to point out the way—they will have to teach us what to look for and what are the laws which govern the symptoms. To make the method perfectly clear, it is perhaps best to place ourselves on an entirely objective standpoint. Let us assume that we know nothing about clinical pictures as they have been described, and let us ask ourselves how we should set about analyzing the complex pictures which we see. We would have to begin with a description of each patient, noting first the more striking features, such as his general behavior, the changes presented in his motor sphere, in general motion as well as in speech. We should further describe his ability or inability to understand our questions or his surroundings, the character of his speech with regard to coherence or incoherence, his reaction to outside stimuli, the presence or absence of false ideas, the changes in the emotional sphere, etc. Such a description would represent the outline of the picture in broad strokes as it were. Now suppose that we have done this; we would then find that our descriptions were insufficient and that it would be necessary to add finer traits, more delicate features. Thus it would be found that it is not enough to say that a patient is depressed or exhilarated, shows motor excitement or motor retardation, that he has delusions or hears voices, or that he is incoherent in his talk, etc.; but that we can add finer traits and nicer discriminations which give a special cast to these symptoms. In doing this we have arrived at a more accurate description; our attention has been called to features which in succeeding cases we shall look for and which will become objects of our study. So it would be with every portion of our description. This very study will stimulate us to develop means by which we can bring out more clearly certain characteristics. It will raise new problems and lead to inquiries especially directed towards them. But as we are not studying mental symptoms from a purely psychological, but from a general pathological, point of view, regarding them as manifestations of disease processes, we will constantly compare differences in them with dif-

ferences in other manifestations. It is this comparison which will draw our attention more or less towards certain symptomatic differences. In this way it has been found that hallucinations, delusions, depression, excitement, confusion, etc., are by no means symptoms or symptom-groups which are in any way distinctive, and the same might be said with regard to other and still finer traits. On the other hand, such symptoms or symptom-groups as memory defect, psychomotor retardation, negativism, automatisms, disorientation, flight of ideas, verbigeration, autochthonous ideas and the like, are of much greater importance. These are symptoms, none of which should be regarded as pathognomonic—a word which in the psychiatry of the present day does not exist—but they are at least more essential than the others above mentioned. They are relatively fundamental symptoms. Such symptoms we must attempt to characterize clearly. The next step is to discover the laws governing them, their possible modifications and the conditions under which such modifications occur. What we have said above in discussing the differences in the symptom-pictures of the various forms of dementia may be repeated here for the active symptoms. In both these fields there is opportunity for experimental study, or, better, for the experimental method, a method by which, in a more microscopic manner, as it were, finer distinctions can be more accurately studied and fixed.

Thus far we have dwelt very little on the subject of combinations of symptoms. And yet it is clear that when we are dealing with a complicated mechanism with intricately connected and interdependent functions, the study of the combinations of traits will be of the greatest importance in order to characterize the deviations from the normal. We have learned by experience that superficial similarities may be produced by fundamentally different alterations. Hence even our relatively fundamental symptoms still need the additional characterization of the combinations in which they occur to make them more distinctive. Moreover, if we find two relatively fundamental symptoms invariably associated, this very association will lead the way to a deeper understanding of their nature. And finally the study of the combinations of symptoms will guard us from a too schematic conception of symptoms. Just as the whole plan

of work, which we have advocated, forces us to take into consideration the whole disease-picture in all its aspects, so will this tend to make us consider not mental symptoms, but the entire mental picture. We are thus endeavoring to discover definite symptoms and symptom-complexes, and to study these in their modifications and relations, and are thus uniting clinical pictures which superficially may differ, while we separate others which may be superficially alike. In other words, we are attempting to formulate the psychological principles of the mental pictures. We must admit, however, the possibility that further studies of symptoms may show us essential relations between pictures which at present may appear to have nothing to do with each other. Or two dissimilar pictures may be found in the same patient at different times. The fact that they exist in the same patient would lead us to inquire whether they are not the outcome of the same process, though we may not be able to understand the relationship psychologically. Again, the study of many cases may by gradual transitions between various pictures show us relations which before were not clear to us. At any rate, important as fundamental relations between symptom-pictures are, their dissimilarity, even in essential traits, does not exclude *a priori* the possibility of their being the outcome of the same disease process. Finally, it will be necessary to return for a moment to the doubt which exists as to whether different diseases have necessarily fundamentally different symptoms. Symptoms may differ according to the localization of the process in this or that functional group of nerve-elements, or according to the intensity of the process. Again, there may be still other possibilities in the process itself of which we have at present but little conception. With regard to localization, it may be that some disease processes are by nature limited to certain functional groups of nerve-elements, while others may have no such boundaries. The latter seems to be the case in general paralysis, But it is difficult at present to speculate on these questions, and only further study, here especially of an anatomical nature, will bring the necessary light. I think it is evident that we gain by a study of symptoms in conjunction with the other manifestations not only scientific data, but also important practical aid towards the development of a diagnosis and a prognosis.

We have not mentioned the physical symptoms, among which are included chemical alterations, alterations in the blood, etc. These are very important, but we need not dwell on them here, as it is evident that they all have to be studied in the same manner as the mental symptoms and that the data which we gain in these studies should be analyzed and adapted to our purposes in the same spirit in which all the manifestations dealt with are used in the general scheme of our work.

It is not within the scope of this paper to speak at length of the pathological-anatomical lesions. The outlook as regards the obtaining of valuable findings in this field seems at present more favorable than ever before; but even here we must remember that the lesions after death represent only one group of manifestations of the disease process and that our studies of them are only of real value when they are combined with careful clinical observations. Only as these mutually assist each other will they lead us to a recognition of diseases.

It is a difficult matter to sum up principles when we are dealing with things not yet elaborated and to find in a short address the *via media* between the fault of bringing too much detail and too many illustrations and that of stating things too concisely. Owing to the character of this paper, I have been forced to confine myself to stating the standpoint instead of discussing it at length. I have no doubt laid myself open to many criticisms. In one point I ask your forbearance. It would have been desirable to stand objectively above the whole matter, yet from the very nature of the subject it was inevitable that ideas suggested by the work itself, though as yet unelaborated, should exert their influence. If I have been able to make myself sufficiently clear to stimulate others to earnest work in clinical psychiatry, my purpose is achieved. What I have attempted, then, has been to outline a general working plan and not to develop a classification. The classification which we adopt is not final, but tentative; it merely represents our present state of development. Our conceptions are bound to alter as we go on, as we are able to enter more deeply into the differences within the different groups of manifestations and are able to analyze them and discover the laws which govern them. But this is not a disadvantage; on the contrary, this conservatism with regard to final questions seems to me of the greatest importance.

THE ALCOHOL QUESTION.

By PROF. A. FOREL, M. D., Ph. D., LL. D.

In answer to the request of a friend living in the United States, I shall try here to sketch briefly my experience and views on the alcohol question generally, and especially my impressions with reference to the United States. The latter may seem daring, considering that I stayed in the United States seven and one-half weeks only. It is indeed not my intention to parade my personal experience in the United States; but it seemed to me possible to gain some correct judgments through personal discussion with many people of the most diverse circles and views and also from a few comparative observations.

My present views on the alcohol question came to me in the following manner:

Brought up in the midst of a country of vineyards on the Lake of Geneva, I considered wine an almost indispensable part of human food, being accustomed from childhood to drink some daily. I was given wine to strengthen me, to form blood (and what all), and God knows for what all. Intoxication and alcoholism, with their accompanying and consecutive phenomena, are matters of daily observation on the Lake of Geneva, matters which, then, people would laugh over or scold about, according to the case. They always were the personal fault of the intoxicated, his mistake or vice, the consequence of the abuse of a divine gift. The line of distinction, of course, between the justified joke of a jag at which people would laugh, and the criminality of an intoxication which called for denunciation always remained uncertain to me. For however amusing a funny drunkard, or however disgusting or fearful a coarse or furious drunkard may be, the cause remains the same, and no one can help his brain reacting to wine to-day in one way and to-morrow in another.

A discriminating and thorough consideration of the matter I never arrived at, from sheer indifference. I liked wine moderately taken, because I was accustomed to it, although, or per-

haps because, I had an agreeable sensation after it, *i. e.* was slightly exhilarated. Most moderate drinkers are known to disclaim energetically this light intoxication, owing to either a tendency to brag or to a lack of self-criticism. In a thoughtless manner I repeated the arguments in favor of wine instilled into me, as one will do with all things which have become a habit, without, of course, ever having formed an independent opinion. With all that, the wine taverns and the vulgarity of our customs of drinking were an abomination to me, and I still have a few bad verses of pessimistic satire which I made on it as a youth and in which I described our people as going to ruin through inebriety. But my independent thought could not rise against the powerful mass-suggestion. The possibility of an abolition of the use of alcohol in me and in others never came into my mind. I never had seen a total abstainer.

Thus I grew up. I suffered much from disorders of digestion, later, especially from cardialgia and headaches, without having an idea that two or three glasses of wine a day might have something to do with it. I then studied medicine. My teachers all taught me that those suffering from alcoholism must get alcohol or they would die of collapse. They further taught me that inebriety was incurable. Drinkers would begin to drink excessively over and over again and would never again become temperate. Abstinence was never spoken of; none of our teachers thought of it; and I suppose most of my contemporaries in central Europe shared my experience.

In 1873 I became an assistant of v. Gudden, at the Hospital for the Insane at Munich. There, the drinking of wine was replaced by the drinking of beer, and my disorders of digestion became considerably worse. I realized this, but believed that I ought to drink beer, although in great moderation. There I saw beer and brandy drinkers come to an end or to a relapse. This at last made me consider the idea that, after all, alcohol should be completely taken away from these patients. But my chief and my colleagues overwhelmed me with sneers and derision. What! You want to deprive the poor creatures of their sole happiness, you heartless fellow! "But," said I, "what if this happiness leads them to death or to suicide?" "Oh, you cannot change that anyway!" This was traditional logic.

At that time I heard for the first time of "temperance people," of totally crazy Americans and Englishmen, sectarians and fanatics. One day I received a letter from an English abstainer who wanted to get some information on the Munich beer alcoholism. Well, I admit this with a feeling of shame, I was weak enough to pooh-pooh the man, because I was afraid of being pooh-poohed by my colleagues. I followed the official German medical cant and acted as if there were really no beer alcoholism in Munich. To this day I feel ashamed of that letter. Ever since I wrote it, it has felt like a weight on my conscience.

The reaction of something evil often leads to the good. Remorse frequently made me wish to know more of total abstinence; but I had no opportunity. In 1879, I became director of the Burghölzli Hospital for the Insane and Professor of Psychiatry at Zurich. I made a first weak attempt and recommended my numerous alcoholics to avoid all alcoholic beverages, and did not give them any for some time after the delirium was over. I, myself, however, went on drinking and so did the attendants, and all the other patients and everybody outside. My words remained words, and after their discharge, and frequently before, all the alcoholics resumed drinking.

About 1882 or 1883 I had treated in vain a confirmed dipsomaniac who was admitted to the hospital four times. He always began to drink again, struck his wife, threatened murder, etc. I pronounced him incurable and recommended divorce and detention. At the advice of a minister, the wife made an attempt to take him to a small asylum for inebriates of a temperance society at Basel, then unknown to me. There he remained six months, became a total abstainer and agent of the society in Paris. From that city I received a sarcastic letter from a relative of mine about a year later; the patient sent his regards and thanks for the treatment, since he had been cured in Basel—he has indeed remained cured since, *i. e.* for fifteen years. This made a deep impression on me. Here I was paid and employed by the State to cure my patients and failed to do it, while medically untrained people succeeded. In this case we did not deal with one of those numerous cases of spontaneous cure of a mental or nervous disease which the ignorant ascribe to their quackery. It was an undoubted effect of treatment. I took the lesson with

a good grace and congratulated the cured patient. The old remorse cut deeper than ever. I tried to get some information, but did not find any. All my efforts to turn my alcoholics into permanent water drinkers were in vain. Fully 25 per cent of the male admissions to my hospital were alcoholics. Later their number rose above 30 per cent.

About 1884, I happened to send for a shoemaker in the neighborhood, a Mr. J. Bosshardt, to take my measure for shoes. After this had been done I offered him a glass of wine as is customary with us. He declined with a smile. I was surprised and asked him if he was a temperance man. "Yes, sir." "Total abstainer?" "Yes." "You have a society, perhaps?" "Yes, a small one in our part of Neumünster; I happen to be its chairman." Then I jumped to my feet. "You are the man for whom I have long been looking. Will you receive into your society the alcoholics who leave the hospital? I should send you the most promising cases with profound gratitude." "With pleasure; send me all; one never knows whether the apparently worst ones do not turn out the best after all."

We rapidly came to an agreement. From that day every alcoholic who was improving was sent with an attendant to the shoemaker and to the meeting of the society. With a touching self-sacrifice and with the greatest insight the poor man devoted himself to the patients. His recompense was their recovery. And as if by a charm, for the first time in my life, I saw drunkards recover, truly and *lastingly* cured. To be sure there remained many relapses, since only the worst ones came to the hospital for the insane; and the poor shoemaker suffered many a disappointment which pained him very much. Yet his angelic patience could not be discouraged. This lasted one year and a half longer. I myself felt worse and worse over it. The medical part I played in the arrangement appeared more and more pitiable. One day I said to Mr. Bosshardt: "Well, dear friend, it is nearly two years now that you have devoted yourself in such a disinterested way to my alcoholics, and that many get well is something I never saw before. Please explain to me how it is. I am paid by the State to cure these people, and I cannot do it. You are the one who cures the drinkers, not I. Why can I not do it? I am deeply ashamed." He answered briefly with a

smile: "It is very simple, Director; I am an abstainer and you are not. That is the secret. You cannot teach others convincingly that which you do not do yourself." "You are more than right," I answered; and I put an end to my wine-drinking.

From that day (1886) I became an abstainer. It is true, I was afraid it might hurt my health, so deep were the roots of the prejudice in my head. I had made a former trial of abstinence which was too short and it succeeded half-way only; but I could not stand such a humiliating condition any longer, which formed such a contrast with my obvious duty. On the same day my wife and myself became abstainers. I thought then that she made a great sacrifice, whereas she did not care at all for alcoholic drinks.

From that day, and as if freed from an evil charm, I could depend on my own sails and did not need anybody to assist me to cure alcoholics. One must have gone through such a change to fully appreciate the power of example and of the force of one's own consistence in action. Hundreds are the numbers of drinkers and drinkers' families which I have cured since then and led from the deepest misery to a happy and useful existence.

Through this work I had at least twenty times as many positive results of cure as in all the rest of my twenty-four years of psychiatric activity. This fact cannot be shaken.

The anticipated weakness and anæmia did not come. Instead of this, I had lost my cardialgia within three months, and also within ten years traces of gravel promising gout and, after awhile, also my formerly frequent headaches. Mental and physical efficiency were increased in a manner not foreseen. The greatest mental over-exertions were stood with ease. In addition to my former works the following years brought the study of hypnotism, the foundation and chairmanship of the Board of Directors of the Drinkers' Asylum at Ellikon, which had as its excellent immediate director the above-mentioned former shoemaker, Mr. J. Bosshardt; further, the foundation and direction of several magazines and lodges, and an enormous amount of work for the introduction and support of various societies of abstainers, the organization of total abstinence in the entire asylum for the insane at the head of which I stood, a large correspondence, etc. Since that time, I have published in a shorter time

twice as many scientific and other papers as before and have used every short leave of absence of four weeks for rapid journeys to tropical countries or into the mountains for the study of ants. I had periods of two years with hardly a day of rest, during which I did not know the Sundays any longer. I never could have foreseen or believed that giving up two or three glasses of wine a day could strengthen me to such an extent, and yet it is literally true, although I should not recommend anybody to work uninterruptedly from eight in the morning till one o'clock at night with but short intermissions for meals, as I have done for years. I do not want to speak here of all the opposition, persecutions and annoyances which were concentrated on me at Zurich in my anti-alcoholic campaign.

That by such experiences my views on the alcohol question became thoroughly cleared will, I think, be readily recognized. I had begun with the idea that I was making a sacrifice to my duty, *i. e.* the cure of the patients confided to me, and I was soon to realize that I myself, together with nearly everybody in my country, on the contrary, had for thirty-eight years been the victim of a gigantic historically important prejudice. I soon became acquainted with the temperance movement in America and Northern Europe, and within a year, as early as 1887, I presided as a convinced abstainer at the Second International Congress against the abuse of alcoholic beverages at Zurich. Even then, the cure of the drinkers appeared to me as merely the first step, as the beginning of a gigantic work of social reform. For what good is it after all, to spend all the time and labor over the mending of ruins, broken down by other ill-advised people? No! the bull must be seized by the horns; the source of evil must be stopped. Abolition of the consumption of alcohol in any form and concentration for all humanity was the clear and unequivocal aim of the struggle. I was strongly confirmed by the pamphlet on the alcohol question which had then been published by my friend and colleague, Prof. G. v. Bunge of Basel.

The conviction which I had gained through my personal experience and that with nearly everybody else (except a few persons with idiosyncrasies and hypochondriasis) and also through the study of the literature pro and con, that conviction remained to be confirmed or shaken by subsequent experience and studies.

It was confirmed as thoroughly in all its parts as I should wish for any scientific conviction. The sophistry and the lamentable weakness of the arguments of opponents is so general, so uniform, that this really furnished in itself the best proof of the truth of the abstainer's standpoint. Were it not for such immense financial interests, such inconceivable prejudices, sanctioned by history, by poetry, songs, and even by the Bible, and the eminently illusive and alluring effect of alcohol on the brain, one might well despair of the soundness of judgment of that humanity which adheres so tenaciously to the deceptive use of this poison of nations.

But—*mundus vult decipi*. The history of the world shows this. The Southern States of the Union, too, first required a bloody defeat before they learned to recognize that the abolition of slavery implied the salvation of the white race in their country and that the real mistake had consisted in the importation of negroes to America.

My present arguments are briefly as follows:

Experience shows that in all countries where the alcoholic habit reigns, it accounts for from one-half to three-fourths of the crimes, a great share of suicides, of mental disorders, of deaths, of diseases generally, of poverty, of vulgar depravity, of sexual excesses and venereal diseases and of dissolution of families. In Switzerland, careful statistics of the fifteen largest cities (10,000 to 160,000 inhabitants) show that one-third of the male suicides and one-tenth of the deaths in men above twenty years are wholly or essentially referable to alcohol. For the male insane I found alcoholism to be the direct cause of the admission in one-third.

The worst feature, however, is the effect of the poison on the sexual glands of the drunkard, which promotes the production of deformed progeny by direct degeneration of the tissues. Evidence:

Prof. Demme of Berne, famous as a physician of the diseases of children, not an abstainer, compares the progeny of ten families in which the father, and in a few cases also the mother, were drunkards, with that of ten sober families. The ten families of drunkards had fifty-seven children. Of these twelve died very early of weakness, eight became idiots, thirteen epileptics, five

dwarfs, five had malformations or were deaf mutes, five became drunkards with chorea or epilepsy—only nine remained normal. The ten sober families had sixty-one children. Of these five died quite small, two suffered from chorea, two were mentally backward, but not idiots, fifty remained quite normal.

In her beautiful comparative statistical study for the comparison of the hereditarily important factors in the ascendency of the insane and the sane (a dissertation made under my direction at Zurich), Dr. Jenny Koller shows that apart from idiocy of the progenitors, alcoholism forms the most seriously implicating factor on the same line with insanity and peculiar character, whereas senile dementia, apoplexies, cerebral diseases, traumata, etc., occur as often with the progenitors of the healthy as with those of the insane. If, however, we consider that idiocy, psychoses and peculiar mental make-up imply merely a transference of a pre-existing disposition, not a direct cause of morbid germs in a formerly healthy person, as in alcoholism, we see at once the enormous social importance of alcoholism for the future of our race, viz., a progressive degeneration with decreasing power of resistance against alcohol. Alcoholism is the principal factor which starts degeneration in the healthy.

I further mention the magnificent studies of Legrain, Sérieux, Legrand, and other French investigators on the heredity in alcoholics.

Further we see that of the 2000 idiots and epileptics of the Asylum of Bicêtre near Paris, 75 per cent have one or two alcoholic parents.

I further mention the 709 known descendants of a drinking woman, Adda Jurke (living about 1760), studied by Prof. Peloman in Bonn. Of these 106 were illegitimate, 142 beggars, 64 supported by their townships, 181 prostitutes, 76 convicted criminals (7 of them murderers). This beautiful family cost the State altogether 5,000,000 marks. This is the ultimate consequence of hereditary alcoholic degeneration of the brain.

He who does not grasp this yet may do well to read the experiments of Prof. Hodge of Worcester, Massachusetts, who found in the progeny of artificially alcoholized dogs almost the same physical and mental degenerations which we have just described in man.

It is evident that there are two kinds of alcoholic heredity: (1) The relatively unimportant hereditary transference of a disposition to inebriety and to intolerance for alcohol. (2) The direct intoxication of the cells of the generative organs of man and woman through the alcohol consumed. The latter alone is essential and implies the degenerative factor.

Well, you will say, but alcohol is poisonous in excessive amounts only. A moderate quantity of beer or wine will not do any harm; it promotes pleasant sociability, etc. We do not care to forego this pleasure just on account of a few drunkards, etc. —the well-known argumentation.

This question—what dose is harmless and not poisonous—demanded serious tests. As an answer we have the numerous experiments of Kraepelin, Smith, Fürer, Aschaffenburg, etc. They are not refuted, and have found manifold corroboration.

Doses of even 7-10-15 gm. (¼-½ oz.) of alcohol which correspond to a glass of wine or a pint of German beer (certainly a most moderate dose) are sufficient to regularly paralyze, retard or disturb all the central and centripetal cerebral functions. The number of mistakes in calculation, setting type, memorizing, etc., is increased. Sensibility is blunted, the reaction is retarded. The subjective consequence of the effect is agreeable; one feels heat, cold and pain less; one is less afraid, less accurate, less scrupulous. At the same time a very slight illusional veil spreads over reality, the first beginning of the later intoxication by higher doses. Hence, whenever alcohol promotes sociability and loosens the tongue, it is the consequence of a cerebral intoxication. Whenever the dose is too weak to produce this result, it also fails to have the desired effect. Hence it is evident that the social effect of alcohol is pathological. It may, in Kraepelin and Delbrück's words, rouse stupid crowds to talk. One only needs to study in Germany the "beer jokes," beer conversation and the beer literature. They have stifled in young Germany the idealism, the taste for the classics and the finer mental pleasures throughout broad parts of the nation and in both sexes, to an extent that makes one cry for help. Among the academic youth of Germany, the drinking of beer has truly killed the ideals and the ethics and has produced an incredible vulgarity.

The paralyzing after-effects of small doses of alcohol may last from twelve to twenty-four and even forty-eight hours before the normal figures of total abstinence are reached again.

The muscular power is at once weakened by high doses of alcohol; small doses, however, act at first as a stimulant, perhaps as an excitant of the neural reflexes. Yet, even this stimulation is an illusion. It lasts a little more or less than fifteen minutes and gives place to a more considerable and more lasting paralysis or weakening. The weakness and diminution of the working capacity are the most striking result of these experiments, inasmuch as there is controversy only on some details. Frey alone claims to have found a stimulating effect in the exhausted, not rested, muscle.

These scientific results completely agree with the experience of daily life, and they are, therefore, perfectly credible.

For me the *social argument* is even more important. I gladly admit that a man who takes about one glass of wine a week, practically does himself no harm. After all, there is a certain indifferent minimal dose just as for phosphorus or cyan. But a minimal dose is no longer a pleasure, it is devoid of purpose and merely a weak concession to the general custom. It simply is devoid of any effect.

Where lies the limit of temperance? A Swiss physician, Dr. Jaquet, boldly put the wholesome daily dose as 50 cc., in the Association of Swiss Physicians. After the meeting the physicians drank a goodly amount of wine and wanted to show the few abstainers, among whom I was, that they were not paralyzed. A song was started, but came out wrong and at once proved the alcoholic paralysis and disorder of the society. To the great amusement of the twelve abstainers, the chairman was obliged to interrupt the singing of the three hundred physicians. After awhile I remarked to Dr. Jaquet that he had probably exceeded the 50 cc. by thrice the quantity. His answer was, "There are exceptions."

That is just it. That is temperance put to a practical test. Wherever the drinking habit prevails there are a few really moderate and serious people who actually adhere to the moderate and harmless limit. The larger number believe themselves to be moderate, but exceed the really non-toxic measure very consid-

erably. The great mass, and with them many people of culture, even scientists, and great men, do not think of it, drink more or less immoderately or moderately according to the amount of available money or opportunity, are seduced, lose money, strength, time and health, and serve the alcohol dealers as a field of capture. Those more disposed or exposed gradually fall a prey to inebriety, and become abhorrent examples, the others then take the unfortunate victims of their habit as the black sheep of their own sins. Every drinker, one must remember, was moderate once and did not want to become a drunkard. And how many die of alcoholism of the heart, or of the liver, or of the kidneys without knowing it. I might mention here many of my best friends and really great minds. "The moderate drinkers are the unconscious seducers of the people," says v. Bunge very justly.

When I mentioned this lately to an American scholar, he answered: "Oh, with us in America it is quite different. Only common people drink down their throats; decent people drink only occasionally very moderately with their friends. It is not so much the fashion as in Europe and, therefore, we do not risk anything as long as we drink moderately (we rather believe in educating people to a thoughtful and judicious command of their own inclination and power of self-control than in making the laws of an extremist)." To this I answered that this is so; that the drinking habit came into disuse with you is due just to those total abstainers and prohibitionists whom you attack so. But if you succeed in destroying their work, you will before long, with your "moderate drinking," introduce again in a short time the European drink-habit in America and the entire campaign may begin anew after you have given progress a set-back of from fifty to one hundred years. He had no answer to this.

Moderate drinking is the nursery of inebriety. It leads to social alcoholism with mathematical certainty because this is human nature and because we cannot change the human brain. There is no means of removing the alcohol plague, except by the abolition of the drinking habit.

In view of this fact we may well find peculiar some chemical arguments which laboratory geniuses or malevolent jokers have devised against abstinence. Physiological chemists found that

in the digestion of sugar, especially in a spoiled stomach, very small quantities of alcohol are produced. Hence the opponents of abstinence shout, that sugar is converted into alcohol during the digestion and that the abstainers are, therefore, alcoholics. This is of course nonsense. If the sugar were transformed into alcohol during digestion, the use of sugar would lead to intoxication; this is never the case, although the alcohol produced in the intestines passes at once into the blood and to the brain. These very small quantities of alcohol are quite indifferent, *as long as one does not taste them and does not know anything of them.* This is obvious from what was said above.

Others are always parading the well-known story that alcohol slackens the decomposition of proteids in the body, and draw from this the conclusion that alcohol is an important article of food. I shall not even insist especially on the fact that Miura, working under v. Noorden's direction, has disputed this fact on the ground of careful experiments. But I must protest energetically against that kind of coarse chemical physiological arguments which draw unjustified, yea, frequently, idiotic conclusions from an established effect of a chemical substance on the body. During thousands of years the living human organism has adapted itself in the struggle for existence to extremely complicated compensatory relations and reactions. We have absolutely no right to interfere with this machinery on the ground of our coarse experiments as long as it is healthy, since our experiments cover only the smallest part of the facts, whereas, the 99/100 continue to remain obscure. In patients the mere empirical experience shall decide, and it is well enough known that in ninety-nine cases out of a hundred our theoretical chemico-physiological arguments are shown to hold no water. Just follow up the final fate of the innumerable chemical drugs introduced on the ground of a few experiments or theories.

If it should be true that alcohol slackens the decay of albumen, it does not by any means follow that it is a nutrient material, but rather that here, too, it paralyzes and deranges the vital processes. Might perhaps the drinker's lack of appetite be an advantage and a consequence of that famous and "wholesome" economy of proteids? Who has informed these gentlemen as to whether such a retardation of the splitting of proteids is bene-

ficial to the organism and does not cover up profounder disorders which are not examined more accurately yet? Is not, on the contrary, all evidence in favor of this latter possibility, if we consider the havoc which alcohol plays even in small doses in the nervous centers and in greater doses in almost all the tissues? Such a thoughtless sophistry which professes *urbi et orbi* with an authoritative manner and great assurance, does infinite harm and would really be criminal if it were not so silly. It sounds like mockery to call a substance an "economizer" which ruins the people physically and mentally and economically. Just compare the results of nutrition and energy in the drinkers treated by abstinence in the institution at Foxboro near Boston (see the annual reports). There you will get practically acquainted with the physiological effect of the removal of the "economizer." I am glad to have in this point the complete approval of my excellent and highly competent friend, Dr. Herter, professor of physiological chemistry in New York.

In brief, I know of not one sensible reason which would justify the moderate use of alcoholic beverages (and of other narcotic drugs like cocaine, hashish, opium, morphine, ether, etc.), and, on the other hand, know of innumerable most serious scientific and social reasons which condemn the indulgence very stringently.

There only remains the argument of the pessimists who prefer non-existence to existence and would like to favor mankind with the illusions of a slow death in narcosis. This party might well unite on some lonely island and alcoholize itself to death. I gladly sympathize with them as long as they do not produce poor children who think differently, and do not trouble with their example and lamentation those who want to live, work and progress cheerfully. This is my absolute condition. We others want to live and to strive; we do not want to succumb to the peaceful competition with inferior but stronger and more prolific races as the negroes and the Chinese. For to what end should we have advanced our civilization so far? There certainly are even higher and more complicated factors of social progress which we must strive for; I merely allude to the sexual and economic field. But alcoholized brains and bodies will not do this. Hence, before all, eliminate alcohol as a stimulant, eliminate opium and all the

so-called pleasurable poisons which lead to the degeneration of nations.

In this sense we have begun in Europe a scientific, social and hygienic campaign against the use of alcohol which makes encouraging progress. The United Kingdom Alliance, and the Union of Opponents of Alcohol among the educated, as well as the Independent Order of Good Templars among the people, work under this standard. The same is done by numerous physicians, teachers, students and college clubs in Great Britain, the Scandinavian countries, Germany, Holland and Switzerland. In France, too, the day begins to dawn under the powerful influence of Dr. Legrain. Yet we are just in the beginning.

What then can I say of America?

The country where Dr. Benjamin Rush first proved, about the beginning of the century, that alcoholism is not a vice, but a disease depending on intoxication, was also the pioneer of the reform. After powerful struggles, it has wrought great reforms and, above all, has largely brought into discredit the habit of drinking at table and in good society. The closing of the saloons on Sunday, local option, asylums for drinkers, temperance legislation, instruction on temperance in schools, prohibitory laws in several States, etc., are so many great steps of progress and conquests of which America may well be proud and to which the abstainers of Europe look with the greatest interest.

Nevertheless, the last few years have brought a certain relaxation, a certain malaise and a certain cessation of effort, the causes of which I have tried to understand. We learn most from the opponent. I had for a long time felt while in Europe, and really found substantiated, that the men of official science, the teachers of American universities are either indifferent or are opposed to the movement. I therefore made an effort to search for the reasons, and was astonished to find with most a great ignorance of the alcohol question and of the social and individual effects of alcohol. The threadbare arguments of our European opponents (see above) were presented to me everywhere, and I might have thought I heard the echo of my old colleagues of long ago in Germany; of independent and unprejudiced study of the question but little was to be heard. On the other hand, there appeared through it all very plainly the animosity against the kind

of procedure of the religious women who direct the movement, and especially the fear of compromising one's scientific position, by siding with such elements. Years ago Prof. Ewald, in Berlin, reproached me when I recommended hypnotism: "It is a shepherd's therapy, unworthy of a physician." To this I responded that unfortunately the history of medicine had often enough shown that shepherds and their kin were right rather than the official representatives of science, and that every therapy that cured was scientific. Science demands truth and does not ask where it comes from. The fear of compromising one's self is unscientific; it is a disgraceful human weakness. If a religious woman is right, I must side with her; if she is mistaken, I must fight her without any consideration for her religious views.

Moreover, there was much adverse criticism of prohibition; that it was premature, ineffective, promoted hypocrisy and clandestine drinking, and provoked antagonism; that too much religion and too much politics were mixed with the matter, etc. Whenever, however, I asked the critics what they wanted to do positively to improve the situation, most of them were helpless and knew very little; the Gothenburg system, high taxes, moderate drinking, and similar prescriptions which, as is well known have failed everywhere; for it is not to the Gothenburg system, but to restrictive laws that Norway and Sweden owe their success.

Unfortunately my time was too short to gather any experience of my own. Yet so much I saw, that in the no-license districts and towns where I was, a gratifying order and cleanliness and manner prevailed; whereas, I saw in many license towns disgusting bars, saloons and filthy, vulgar, drinking dens with the corresponding people. I saw nobody intoxicated in the no-license districts in which I was. A lady who was not an abstainer told me, it was, after all, true that as soon as license was given anywhere such awful saloons would spring up very soon, bringing rough people such as are not seen where there is no-license. This unprejudiced testimony seemed to me of value and agrees perfectly with the results of the statistics of the State of Massachusetts. Also a very reliable friend, who is not an abstainer, and who lately spent several months in a small town on the coast of Maine, was delighted with the upright sailor population and their sobriety. He saw nothing of intoxication and secret drink-

ing. After listening to those pro and con, and my own comparison with our European conditions, I should like to sum up my humble opinion as follows:

In the United States the various parties and efforts know altogether too little of one another. They frequently accentuate the differences owing to misconceptions. A scientific alcoholic movement independent of religion and politics is almost completely absent. This is a serious defect. This explains why, for instance, in asylums for drunkards like Foxboro and the Washingtonian Home, which I visited, absolutely no scientific anti-alcoholic literature is given to the patients and there is practically nothing done for the after treatment and later maintenance of abstinence, although this is just the chief point. One does not even grasp the fact that only an abstainer from conviction can successfully direct such an institution. Much money is spent on gymnastics, baths, etc., certainly fine things; also in other respects Foxboro fulfils almost all the conditions of a model institution, yet the leading thought of decided permanent abstinence is missing. It is not right to make the religious prohibitionists responsible for this. They acted as well as they could and as well as they knew how and may have blundered in many points out of ignorance. The blame rests on the sin of omission of those who have a scientific education.

In America, political and religious distinctions are very intense. There are great extremes; hence, there is mutual distrust and fear of being taken advantage of. How far the resulting anxiety of creating an unpleasant impression may lead can be seen in this: The brother of a Good Templar, a policeman, was asked whether he did not want to join the order of Good Templars. "I should like to, but I dare not; it would at once be taken for partisanship and I should lose my job." There is no doubt that we are more independent in Switzerland. Such timidity paralyzes the best and most humane efforts.

With gigantic steps and an unheard of brave spirit of enterprise, North America has formed a power unequaled in the history of mankind in the course of this century. A magnificent future undoubtedly is in store for her. Yet the inner machinery of such a thing cannot fail to have its hooks and frictions. A powerful stream of emigrants annually pours into the United

States. Notwithstanding the most remarkable and rapid power of assimilation of the American people, every single emigrant, who, after all, lives many years and brings with him all the prejudices and customs of his home, cannot be Americanized in a single day, especially if he finds there a colony of countrymen. The Irish especially bring a powerful army of obstinate and passionate drinkers to America. In another respect the Germans are almost as bad. On account of their assiduity and efficiency, they are well thought of; they are excellent aiders of civilization; but they usually represent the financial interests of the alcohol industry, especially the breweries; and they passionately and with all the means of their press take the side against abstinence. They even take drinking to be a kind of national distinction, and the faces of very numerous German-Americans give a shining testimony of this. Now the Irish and the Germans form a power in the United States; they are at once opposed to and in need of temperance. It is certainly very good that the Americans have a high respect for German science, for it deserves it. It seems to me, however, that this profound respect is about to lead many American savants to a very undeserved respect for the German manner of drinking and beer marasmus through an unfortunate and unconscious association of ideas. Surely the vulgar demands of uneducated emigrants for alcoholic beverages and their disregard for the laws ought never to be a reason against abstinence, but rather to urge its energetic promotion. The American knows how to polish the emigrant rapidly and how to teach him better manners; he ought to make him sober, too, even if he should be an "educated" German.

The most frequent objection against the prohibition laws is that they never are carried out and lead to corruption. This argumentation is continually rehearsed in the most thoughtless manner and requires a closer analysis. There is no doubt that in America, laws are made in great numbers and respected little. I only mention lynching and similar things. An American lady told me: "We have an amendment to the eighth commandment: Thou shalt not steal—except from the State." I cannot judge of these things myself; but with us in Switzerland we should say: "Thou shalt not steal, especially not from the State." If there is some truth in the statement, it would explain many things. I

have always said, "It is illogical and untrue to make the prohibition laws responsible for financial corruption and hypocrisy. Nobody will convince me that in license districts and States corruption and hypocrisy are less and the laws are better observed. This should be proved before one believes the biased assertions of alcohol dealers and enemies of temperance. Corruption seems to be a fact which appears in a *definite specially* American form with the corresponding hypocrisy, together with the omnipotence of money and the unlimited chances of individual accumulation of wealth in the United States. Whether it is associated with license or no-license makes but little or no difference. One ought not to bring wholly different things into an artificial causal connection merely because the two co-exist in the United States.

An earnest and efficient friend of reform, but opponent of the prohibition laws, complained to me that the local option drives the scum of inebriety from the no-license to the license towns, which in return become worse and worse. In this I saw a great advantage. One must take pains to open the eyes of the inhabitants of license towns and lead them to no-license by comparison of their misery with the thriftiness of the no-license towns. The complaint refers, however, only to the lack of success of prohibition in the larger cities; its success is admitted in the country. It follows that it ought to be improved for the cities.

I am glad to find the full corroboration of my view in the following passage of the London Alliance News of July, 1899. It says: "To blame the law and not the law-breakers is unjust. I cannot express disapproval too strong of the attempt of Messrs. Rowntree & Sherwell to make prohibitory legislation responsible for the corruption connected with its violation. Is it not monstrous injustice to bespatter the law with drink degenerated mire? It is very extraordinary that Messrs. Rowntree & Sherwell, who describe so vividly 'the political and social menace' of the liquor party at home, should in the next chapter, when referring to America, charge upon prohibitory legislation 'the serious and widespread demoralization' due to the lawless machinations of the liquor rings in the towns and cities under their control. The utmost that can be said against the prohibitory law in such places is, that it is too good for the people, and that its systematic violation constitutes an argument in favor of permissive as compared with imperative prohibition."

I should like to subscribe to every word and to add that the alcohol dealers do not abhor the most corrupt and objectionable means to provoke the violation of the prohibition laws with lies, intrigue and agitation and to fight them, since their pecuniary interests are at stake. Shall we yield in a cowardly fashion and give up all this acquired magnificent progress in order to again fall a prey to the old European misery of inebriety, to bring about conditions such as prevail in France to-day?

We take, as a concrete instance, perhaps the infamous fraud of the so-called tonic bitters, tonics, etc., praised as "purely vegetable," "recommended for inebriety," "free from alcoholic stimulants," "free from opium," but in reality full of opium and alcohol. Shall this humbug call for license, or for an energetic punishment of those national poisons? And if the punishment is not carried out and the law is broken, is it the fault of the law, or is it not rather the fault of the insolence and corruption of those criminals combined with the weakness of the authority of the State? It may be that many prohibition laws were premature and that their application and the manner of enforcement leave much to be desired. I am unable to judge of the contradictory data and views for lack of actual acquaintance with the facts. I have, however, learned from a reliable source of a truly nonsensical application of the law. It is the following: In Boston the intoxicated are arrested according to the law. Many (about two-thirds) whose cases are light, are acquitted by the judge after the trial on the next day. The others are fined and if they cannot pay they have to go to jail for about a week. This does nothing for the improvement of inebriety. Those who have money pay their fine; the poor are fed for a few days at the expense of the State, and do not care any further. Yet this law might be transformed very beneficially under avoidance of a pedantic legal formalism, if the punishment would consist in the transference for a short time into a good State institution for drunkards, where the people would get instruction and treatment; those who can should pay the expenses themselves. Those who are not punished might at least be given the address of a temperance society free from religious color. But, no. This does not fit into the bargain of the old-fashioned lawyer. *Fiat justitia; percat mundus,* in America as with us.

It is true that, for instance, in the license city of Boston with over 500,000 inhabitants, there are every year from 25,000 to 30,000 persons arrested for drunkenness. It is further true, that in the larger cities of the prohibition States, there is much clandestine drinking, although there is less drinking than in the license States. But it is very easy to import alcohol under a false title, and those interested in alcohol will attend to the agitation and to discrediting prohibition laws.

I am willing to admit that it may be premature to introduce State prohibition with force and with a small majority without a sufficient preparation of all the strata of the population. It is best to begin with local option and other restrictive measures, but to steadily progress with it. Above all, however, all the legal measures must have a purely restrictive, never a fiscal character, or else they corrupt the State itself. As a final aim, the legislator must always and under all conditions keep in view the total abolition of all distilled and fermented beverages. There is no other sensible or rational aim. The State or the authorities, ought never to become interested in the sale of alcohol, in the poisoning of the nation. Alcohol dealers and producers are the enemies of the hygiene and morals of the people, the destroyers of our race, whether they realize it or not. Their interests deserve no regard. They can and shall make a living in another manner. But it is the duty of every good citizen to set a good example, to become an abstainer, and through instruction and practical help, divert all the strata of the population more and more from the use of alcohol, from the disgraceful degenerating drink-habit. Yes, it is necessary to become a total abstainer. For as long as one drinks even just one glass a month one feels the irresistible need of excusing and defending that glass and unconsciously one becomes an advocate of the alcohol habit. To drink alcohol and to fight its social consequences effectually do not go together. I have experienced that in myself, as related above. And if there are rare exceptions, they merely prove the rule. Only total abstainers are really efficient in the campaign against alcohol. The government cannot be told this emphatically enough. Public opinion must be educated in this sense *independent of politics and religion*, in the rich and poor, the educated and uneducated, the Irish, the German and the Anglo-Saxon, Catholics and Protest-

ants, the liberal, the savants and the ignorant. In the first place, however, it is the duty of the physicians, the guardians of public and individual hygiene. In Europe there are already powerful medical societies of abstainers for this purpose.

One more word on the anti-alcoholic instruction in the schools. I consider it indispensable, and its introduction in the United States means a great and powerful progress. I merely regret its form. It ought not to appear under the title of a pure doctrine of anatomy and physiology, for these sciences as such do not tolerate any such special tendency. The title should be more modest and should correspond more closely with the contents. One should concentrate in it the most important unequivocal statistics and facts which make the use of alcohol so objectionable and dangerous scientifically, socially and hygienically, without mixing them up with other facts of anatomy, of physiology and of hygiene. Every point must be correct, scientifically accurate and in its proper place. For this, a gradual correction and improvement of the titles and of the contents of the existing books in new editions might be sufficient. I am far from belittling in the least the highly important social work of the anti-alcoholic instruction.

With keen attention we follow in Europe the vacillations of the great alcohol reform in North America. Noblesse oblige. The Americans are the pioneers and leaders of the movement. To them is due the honor, but also the duty, to be the first to bring that powerful social reform to a victory on which a great share of the future of our race and its civilization depends.

That new continent which is free of our prejudices of an Old World, which shows the light springing from the confluence of the races and ideas, and which has already produced so many great things, such as the abolition of slavery, shall again in this field reap the lasting success. The progress of social hygiene should ripen as a fruit of the victories of scientific insight.

DEMENTIA PRÆCOX.

By GERSHOM H. HILL, M. D.,

Independence, Iowa.

Our professional fathers in this specialty contended that deranged persons are not possessed with devils, nor bewitched, nor mad, but that they are suffering from disease, and, consequently, need kind care and skillful medical treatment. They are patients and require the advantages of a hospital. Ray, Kirkbride, Van Dusen, Ranney, Gray and Godding were pioneers in this work. Their contention for buildings sufficient in size, suitable in arrangement and good in quality, was successful. Although how to secure proper care for all the chronic insane is still a vexed question in most States of our Union, we now have well-equipped hospitals for the treatment of the acute insane, and competent physicians and trained nurses to minister to them. In most States sufficient funds are provided to carry on this work. During the time that good provision was being secured for the insane, general hospitals multiplied. Physicians have learned how to use the knife and surgeons how to practice medicine. During the last quarter of a century the time required for a medical education has doubled and the facilities for learning the science and the art of medicine are not to be compared with those of olden times. Furthermore, we now have opportunities for studying insanity in a more scientific manner. Since less of our time is taken up in enlightening law-makers and in superintending the construction of buildings, we can with great advantage to our patients, study the causes of insanity, observe the clinical symptoms of the men and women placed in our hands for treatment, make each individual a separate object for research, not only while he is an occupant of the wards of the hospital, but as far as possible from the beginning to the end of his life.

It has always been my purpose to make a post-mortem exam-

ination of the brain and other organs of every patient who dies in the hospital for the insane with which I am connected. For many years we have succeeded in doing this; it has only been a few years, however, since I have succeeded in getting a sufficient number of physicians on the medical staff of the hospital to enable us to do good, systematic work in our pathological laboratory, and at the same time study mental derangement in the wards of the hospital in a systematic manner. If the physician, who gives the patient a thorough mental and physical examination at the time he is admitted into the hospital, does not already know the family history of that patient, the extent of his schooling, his social, his religious and business life, together with the more prominent characteristics of his nature up to the day of his reception into the hospital, these facts are secured, by correspondence or otherwise, as soon as possible; then an abstract of the history of each patient is read, at an early day, in a meeting of the medical staff of the hospital, and the etiology, the diagnosis and the prognosis in each case are determined, if possible. In order to know the results of treatment in the hospital, it is desirable, as far as possible, to keep track of all patients after they are discharged.

In undertaking the scientific study of insanity, we are using Kraepelin's methods, and his classification of the different forms of mental derangement as a guide. The understanding is, of course, that the nomenclature used, and the grouping of cases agreed upon, is not final nor surely correct, but only hypothetical and tentative. At the meeting of the Association last year, Dr. Cowles, in a broad and masterly manner, made a comparison of the forms of insanity as suggested by Kraepelin with those which have been most commonly recognized by alienists. Instead of studying insanity chiefly from an etiological or from a symptomatic standpoint, Kraepelin proceeds by keeping constantly in mind and in the foreground the prognosis in each case. Is the patient, whose condition is being studied, likely to recover? Is the nature of the case such that the disease from which the patient is suffering can be cured? Is the restoration, which results from medical and mental treatment, a complete one of the body and of the mind? Is the cure which results from treatment permanent? In going over our case-books and in calling to mind as far as possible this patient and that patient and every

patient discharged, five, ten or twenty years ago, do we find that they are still living? Have they remained permanently absent from the hospital in a capable and stable frame of mind? If they have suffered from subsequent attacks of mental derangement, were their minds sound between the attacks, and what were the results of subsequent treatment in such cases?

For ten years Dr. Pliny Earle made extensive inquiries and calculations as to the curability of insanity. In summing up his work in this direction, in 1886, he says: "The most general conclusions to be derived from the statistics included in this study are, first, that the old claim of curability in a very large majority of recent cases is not sustained, and that the failure to sustain it is more apparent and more striking than at any preceding time; and, secondly, that the percentage of reported recoveries of all cases received at the hospitals in this country continues to diminish." Although fourteen years have elapsed since Dr. Earle made this statement, and although insanity is much more skillfully treated than ever before, yet I am of the opinion that permanent mental impairment is present in a large proportion of patients discharged from our hospitals as cured.

The object of this paper is to suggest that alienists ought to persevere in their efforts to secure a scientific nomenclature for the different forms of insanity. This can be done partly by individual observation and study, partly by co-operation and a consensus of opinion. The general terms descriptive of various forms of insanity, which have been most used, are melancholia, mania and dementia. To these, names for special forms have been more recently added, such as paranoia, general paralysis, epileptic insanity and alcoholic insanity. The tendency of late has been to differentiate cases of dementia. Since there is permanent mental impairment in epilepsy, the condition may properly be called epileptic dementia. Again, general paralysis is incurable and usually progresses from bad to worse rapidly, so it is now characterized as paretic dementia. Furthermore, it is easy to group cases of mental impairment which develop late in life, and are due to failure of the faculties on account of age, as senile dementia.

There is still another method of grouping demented persons. All cases in which the first symptoms of insanity are dullness or

weakness of mind, and when these symptoms persist as the most prominent ones, are called instances of primary dementia; and when the case is first diagnosticated as mania or melancholia or some other form of insanity, but finally the faculties are permanently lost, the condition is termed secondary dementia. Now, according to Kraepelin, cases formerly called primary dementia, and many others, should be named *dementia praecox*.

This is one of the processes of deterioration; the other is *katatonia*. Both of these conditions of weak-mindedness develop early in life, in the teens or in the twenties; seldom are they found in patients of mature years. Organic changes in the brain are believed to be present, and the mental derangement resulting therefrom varies from the slightest impairment of the mind to the most complete dementia. Kraepelin defines dementia præcox as the evolution of a simple, yet more or less well-marked, mental deterioration, having the appearance of an acute or subacute mental disturbance. There may be only a slight manifestation of mental weakness, so that neither the relatives nor the family physician regard the condition and the behavior of the patient as indicative of insanity.

A son or a daughter at home loses interest in study, drops out of school or neglects work, formerly well done, and lounges about the house. No delusions are present, the case is not considered acute nor critical, the individual gives no particular trouble, may continue to perform some simple tasks about the house and so long as fostered can dwell under the parental roof; but there is definite mental impairment which is permanent. More marked cases of dementia præcox exhibit silliness. The subjects talk to themselves more or less incoherently; they smile or laugh without provocation; they are positively indolent; they are careless about their personal appearance and sooner or later may become filthy in their habits. A contrary disposition is not infrequent, and mischievousness or viciousness may be manifested. If such persons become burdensome on account of straightened circumstances in the family, or if the old home is broken up by the death of one or both parents, such a child is sent to a hospital for the insane or to the poorhouse. Self-abuse is often assigned as the cause of the insanity in such cases.

Under the head of dementia præcox Kraepelin places the cases

of certain beggars, tramps and dead-beats, who eke out an existence for a time, but finally land in the poorhouse.

As a rule dementia præcox begins insidiously, but the mental change may come on quite suddenly and the patient may realize that there is something serious the matter with him. Headache, dizziness, or other discomfort may not only be realized by the patient, but be complained of to and receive attention from the home physician. The patient may be restless at night and inclined to keep his bed in the daytime. Food is taken with indifference and possibly regarded with suspicion. Mild and transient hallucinations or delusions may be present. The patient may accuse himself of having bad qualities or say the neighbors are talking about him. Although he may have fair health, he may spend his time in scribbling or fill a long manuscript with nonsense. The sense of decency may be lost and neighbors declare the person to be a nuisance. At times there may be restlessness and excitement; this condition may occur at the menstrual periods or when the patient is restrained on account of disorderly conduct. Some persons who pass into a partially demented condition enjoy perfect bodily health for many years. If well managed, they make good helpers in hospitals and on poor farms. Other patients rapidly deteriorate into a state of complete helplessness. They eat in a greedy or slovenly manner, or take food sparingly or not at all; they may hold saliva in their cheeks or drool upon their clothing; they may retain their excretions or pass them involuntarily. Such persons, when neglected, may acquire most disgusting habits. Some patients soon die of tuberculosis or some other intercurrent disease. Others live many years and in classification may get mixed up with the mass of so-called cases of secondary dementia.

Cases of dementia præcox can only be differentiated by knowing the early history and by continuing observations long enough to determine the course the mental derangement will take. Kraepelin believes that dementia præcox is a very common form of mental derangement; that it usually develops early in life, between the ages of sixteen and twenty-two years; that it is more common in men than in women; that hereditary influence is well marked; that the original endowment of the patients is usually good, in some cases considerably above the average in mentality;

that the true nature of dementia præcox is still obscure; that it may be due to imperfect structure in the brain, so that mental activity and development can not be sustained, but that more probably it is the result of positive brain disease, since it occurs before mature age has been reached and produces permanent impairment.

My understanding of Kraepelin's classification of the insane is that patients do not change from one type of insanity to another, but that the symptoms in the various stages in each case must be known before the diagnosis in doubtful cases can be made. Hence it is necessary to continue the clinical study of this subject for a long time before permanent, scientific conclusions can be reached.

THE INSANE IN GENERAL HOSPITALS.[1]

By J. M. MOSHER, M. D.,
Albany, N. Y.

A half century before Pinel and Tuke's "reform in the treatment of the insane" the inhabitants of the Province of Pennsylvania petitioned their House of Representatives for a "small Provincial Hospital," for the relief of "Lunaticks or Persons distempered in Mind and deprived of their rational Faculties." It was not the first institution for the insane graced with the title of hospital, for Bethlem had been in existence several hundred years, and St. Luke's, also in London, was opened in 1751. Neither of these institutions, however, had shown any purpose to improve upon methods of care then almost universal, and in fact, they have often been cited as illustrations of the cruelties to which insane patients have been submitted.

The law adopted by the General Assembly of the Province of Pennsylvania, and approved by the Governor on the 11th of May, 1751, was entitled "An Act to encourage the establishing of an Hospital for the Relief of the Sick Poor of this Province, and for the Reception and Cure of Lunaticks," and provided for "collecting the Patients into one common provincial Hospital, properly disposed and appointed, where they may be comfortably subsisted, and their Health taken care of at a small charge, and where by the Blessing of God on the Endeavours of skilful Physicians and Surgeons, their Diseases may be cured and removed." In the humanity and charity of its purpose, this law anticipated the efforts of Pinel and Tuke, and by its recognition of insanity as disease and the establishment of a hospital for treatment and cure, epitomized the principles whose general application has not yet been fully attained.

[1] Read at the Annual Meeting of the American Medico-Psychological Association, held at Richmond, Va., May 22-25, 1900.

The accumulation of chronic cases, in which lies the essential difference between the care of the insane and the bodily sick and injured, soon presented a formidable obstacle to the development of the plan inaugurated in Pennsylvania. The disastrous effects of crowding acute and chronic cases upon the same wards, with the consequent subordination of remedial to custodial measures, the insufficiency of proper accommodations and the growth of the almshouse system, with the long struggle for the remedy of these evils, are matters of recent history, well known not only to members of this Association, but to the public at large. Provision for the insane in proper buildings under suitable sanitary conditions having been accomplished, the problem of the medical treatment of recoverable cases confronts us now, as it did the pioneer settlers of Pennsylvania a century and a half ago.

During this time insane patients, with the occasional exception of quiet and manageable persons, have been refused admission to general hospitals, because these institutions do not possess the power of detention or suitable accommodations.

The added experience of this period shows that the claims of two classes of insane patients—the acute and chronic—must be considered. For the latter custodial care is required, affording accommodations consistent with home surroundings; for the former, active medical treatment looking to the restoration of health. Attempts at separate care of the acute cases have been premature and have failed, because, prior to the development of the large modern State hospital, its possibilities and limitations have not been revealed. It is advisable that provision for both these classes be made in the large public hospitals. An institution affording accommodations for one thousand or two thousand patients possesses resources in equipment and environment not to be obtained under any other known conditions. The development of the "acute hospital service," the features of which are now being rapidly evolved, points the way to results commensurate with expectation.

Hospitals for the insane, however, are not always available. The natural reluctance of patients and their friends to commitment often prevents this step until the disease has reached a stage at which the chances of recovery are jeopardized; a considerable class need skilled medical observation before the ad-

visability of removal is determined; and many, especially drug and alcohol habitués, are in great measure irresponsible, but are not recognized by the law. With more manageable cases attempts at treatment are made at home, under unfavorable conditions, the physician yielding under the stress of necessity, and standing helplessly by, hoping against hope for some favorable turn of fortune. When home care is no longer possible, the unfortunate victim, in an outburst of violence or delirium, is hurried away to jail or some other convenient receptacle, his life in the balance, while precious time is consumed in judicial proceedings.

A statement of the abuses arising from this condition of affairs would present an appalling record. An insane woman gave birth to a child in jail, her only attendant being the jailor, who wrapped the new-born babe in an old shirt; a physician, delirious from neglect and the decrepitude of old age, was locked in a cell, where he refused food, abused his person, and in a few days died; a maniacal patient, who was allowed to wander about until he developed a state of great mental confusion, was found in an interior, unventilated, unlighted cell, entirely stripped of clothing, the straw and dust of a dirty tick filling the air, and his body besmeared with excrement.

No effort has been made to collect data of this kind, and no hesitation is felt in presenting these incidents from a year's practice of the writer, for the experience is not local or unique, but illustrative of a practically universal condition.

In the light of such revelations, which concern recoverable cases, State care may be regarded as incomplete until existing necessities are supplemented by additional provision. To meet this want the erection of special hospitals or special pavilions in connection with general hospitals, has several times been suggested.[2] With the exception of the pavilion for the insane and emergency cases at Bellevue Hospital there is no intermediate provision of this kind in the United States.

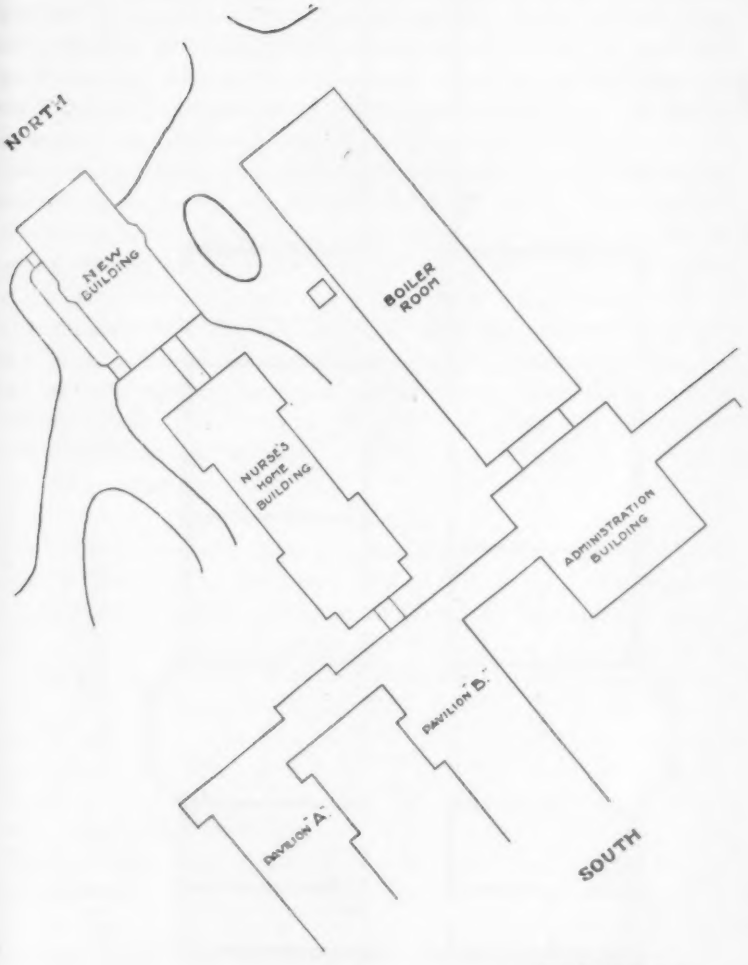
The suggestion is about to be carried out in Albany by the

[2] Henry M. Hurd, "Presidential Address—The Teaching of Psychiatry," American Journal of Insanity, October, 1899.
Frederick Peterson, "Some of the Problems of the Alienist," American Journal of Insanity, July, 1899.

erection of a pavilion in connection with the new Albany Hospital. Under the stimulus of the repeated abuses that occur in the disposition of acute cases, the physicians of Albany represented to the county supervisors the need of this building, and have received a generous response in an appropriation of eighteen thousand dollars. The Albany Hospital is constructed upon the pavilion plan permitting the annexation of an additional building. The administration is to be in the hands of the Governors of the Hospital, as a part of the general organization, the county's rights being protected by agreement to care for its patients at rates conforming to those for other public patients. The plan of the new building, which owes its perfection to the suggestions of Dr. Chapin and Dr. Cowles, has been prepared by Mr. A. W. Fuller, Architect of the Hospital.

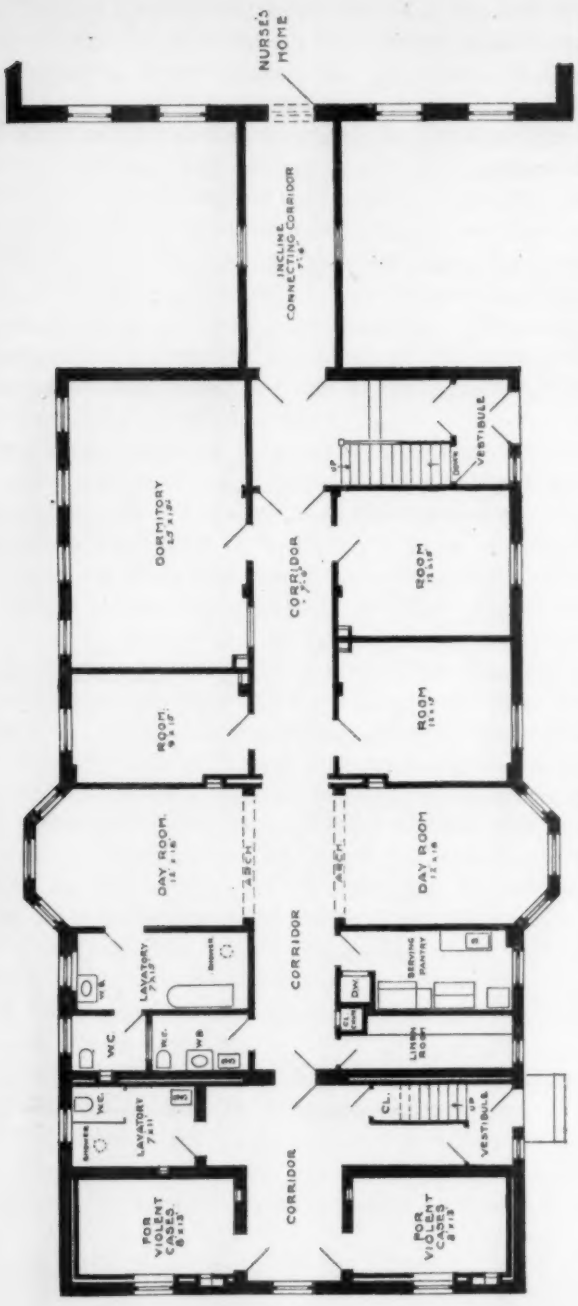
The design provides a two-story building, for separation of the sexes, connected with the main hospital by a corridor, and conforming with the latter in architectural style. The outside dimensions are eighty by forty feet. From the main entrance to a large day-room, traversing the centre of the building, sleeping rooms lie on either side of a corridor. This space provides for one single bed-room, 11 x 15; two single bed-rooms, 13 x 15; and an associate dormitory, 25 x 15. The day-room, with bow windows at either end, supplies ample cross light, and adjoins the service rooms, thus permitting complete distinction between the day and night habitation. Beyond the service rooms, sixteen feet of the distal end of the building are separated by a double brick partition. This gives a distinct section, with entrance and stairway, containing two bed-rooms and service rooms for the care of excited patients. The disturbing element is thus removed from the quieter class during the night by half the length of the building, with several intervening doors and walls. The location of the pavilion protects the city from noise, a result which might otherwise be attained by special disposition of the windows of this extension.

The scheme thus outlined represents the logical development of the modern idea of the demands of the insane. There is no precedent upon which to formulate a prophecy of the ultimate field of usefulness or results. It is anticipated that this pavilion will furnish (1) transient accommodation for insane patients com-



LOT PLAN

A.W. FULLER, ARCHITECTS.
W.B. PITCHER, ALBANY, N.Y.



FIRST FLOOR PLAN.

mitted to a State institution, and (2) for patients who need observation before the advisability of commitment to a State institution is determined; that it will be available (3) for mild cases of insanity who may recover in a general hospital, (4) for victims of drug addiction; and, lastly, as an emergency resort, will minister to (5) rapidly developing and critical cases of delirium, and (6) to the sudden and often dangerous forms of mental disorder which occur in the course of general diseases or after the shock of surgical operations and anæsthesia.

In this legitimate extension of its work the general hospital in no way conflicts with the institution for the insane, but becomes an adjunct or integral factor. As a clearing-house opportunities are offered for the discrimination and preparation of patients for the latter which should add greatly to its effectiveness.

In conclusion it may be said that with the adaptation of the facilities afforded by the general hospital, all claims of the insane may be met, and as conditions demand, treatment may be had

(1) at home;
(2) in private institutions;
(3) in general hospitals:
    (a) in out-patient departments;
    (b) in specially arranged wards or pavilions;
(4) in hospitals for the insane:
    (a) in hospital structures for the active treatment of acute, recoverable cases;
    (b) in detached blocks or colonies for the custodial care of chronic cases.

A CONTRIBUTION TO THE STUDY OF HEREDITARY CHOREA.

By WALTER D. BERRY, M. D.,

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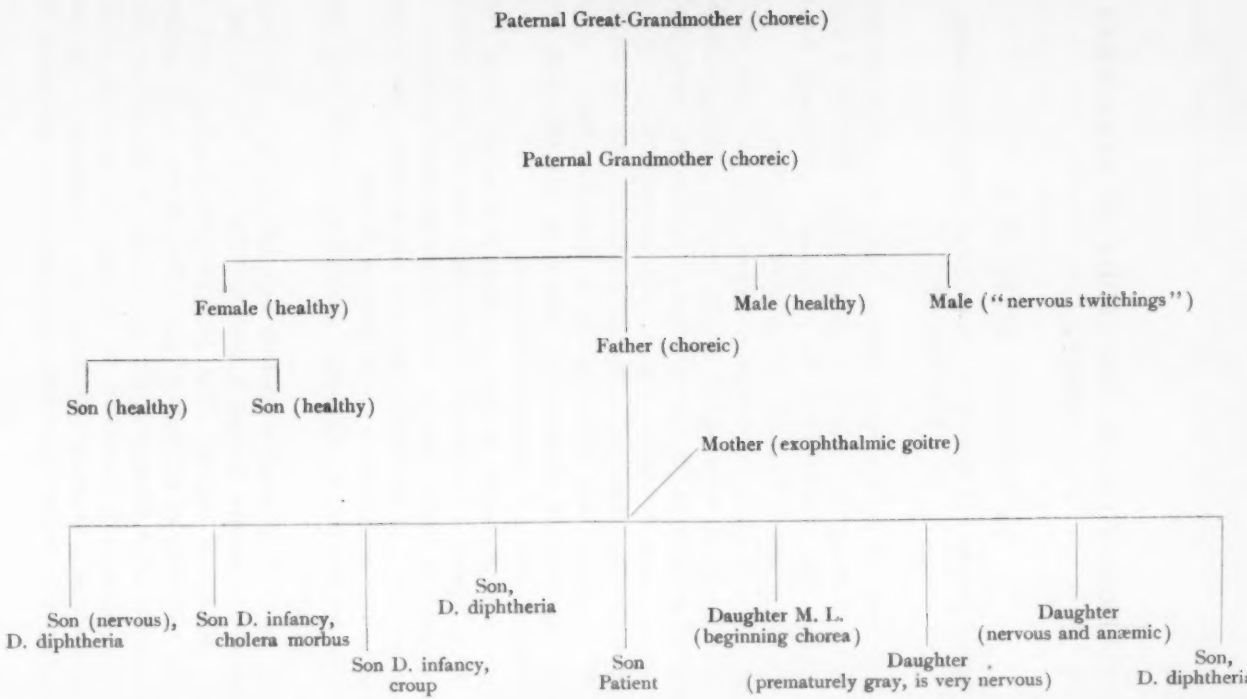
This form of chorea, well known under the more common name of Huntington's chorea, is an hereditary affection of adult or middle life, characterized by irregular involuntary movements, disturbance of speech and gradual dementia.

As a disease entity, dementia choreica, as it has been called, is undoubtedly of teratological origin, typified pathologically by a general atrophy of the convolutions of the cortex, particularly noticeable about the motor region, with corresponding cytological changes that seem to justify the contention that the disease is not circulatory nor inflammatory in character, but is an inherent degeneration of ganglionic masses of this area with concomitant increase of neuroglia elements.

T. G., a patient aged 29, was admitted to this institution Dec. 24, 1894, under a certificate which said that he was violent and abusive at times; that he had threatened and attempted to injure members of his family, and had the delusion that he was the object of admiration of all the girls in the city.

Upon inquiry for an exhaustive anamnesis, the following data were obtained:

The paternal great-grandmother was said to have had incoordinate movements, though it was doubtful as to her having a clear history of chorea. The paternal grandmother died of choreic dementia at 40 years of age. The father of the patient died of the same disease at the age of 60, in Brattleboro Retreat. The records furnished us through the courtesy of Dr. Lawton reveal a characteristic history of this affection. He had been divorced two or three years previous to his coming to the


Paternal Great-Grandmother (choreic)
Paternal Grandmother (choreic)
Female (healthy)
Male (healthy)
Male ("nervous twitchings")
Father (choreic)
Son (healthy)
Son (healthy)
Mother (exophthalmic goitre)
Son (nervous), D. diphtheria
Son D. infancy, cholera morbus
Son D. infancy, croup
Son, D. diphtheria
Son Patient
Daughter M. L. (beginning chorea)
Daughter (prematurely gray, is very nervous)
Daughter (nervous and anæmic)
Son, D. diphtheria

institution, on account of his extreme irritability and because he was subject to periods of violence, for which he had several times been lodged in jail. He had been obliged to quit work on account of "continual shaking" and had taken to drinking "to steady his nerves." During the first year after his admission to the institution at Brattleboro he was inclined to be quarrelsome, was difficult to reason with, extremely variable in his moods and very careless in his personal appearance. His choreic movements became gradually more marked, but according to the record he appeared to be in uniformly good health, being later on more tranquil and tractable with no appreciable increase in choreic symptoms. During the third year of his stay he suffered from an attack of ichthyosis, when he became much disturbed in mind, having delusions of persecution and reacted at times with episodes of violence. Later he became intractable, was utterly unable to get around, could not write, and much of the time his involuntary movements necessitated a liquid diet on account of choking and general difficulty in deglutition. He was discharged as unimproved after about five years' residence, and subsequently was not heard of until his death, when it was learned that he had become gradually more demented and died of exhaustion. Of the four children of the paternal grandmother, one other showed a decided tendency to "nervous twitchings" though, so far as was known, chorea did not fully develop. The father of our patient had nine children, three of these besides our patient showing chorea or the premonitory signs of it.

The patient's sister M. L., aged 40, of anæmic neurotic diathesis, had a history of "worm fits" at 2 years of age. At 17 years of age she had periods when she would suddenly become numb and speechless even while standing, but would not fall, nor was the attack preceded by an aura or accompanied by loss of consciousness. Later at about the 25th year she became decidedly more nervous; at times she would start at the slightest sound; her face and arms would work spasmodically for a time and perhaps days and weeks would elapse before she would regain her full muscular control. This condition became gradually worse and when last heard of she was said to be getting like our patient.

Still another sister, age 30, presents an anæmic, neurotic clinical picture; she is prematurely gray, and is said by her family physician to have had hysterical "spells" and during these spells transitory deafness in both ears.

The mother of our patient gives a history of epilepsy in her own family, she being afflicted with a large exophthalmic goitre, though never herself having been subject to epilepsy in any form.

Our patient as a child was perfectly normal, being robust and strong and able to hold his own among children of his age. He learned to walk and speak at the usual time and at 13 years of age had the reputation of being quite a clog dancer. The ordinary diseases of childhood were unattended by any sequelæ, and the adolescent period was passed without any marked disturbance. A history of venereal disease is positively denied. According to his mother the first symptom she noticed was the involuntary tremor of his hands and fingers at the age of 17 years. About this time he began the use of tobacco and alcoholic beverages as he said "to steady his nerve." It was noted that when under the influence of alcohol his choreic symptoms were greatly exaggerated. He began to work in a contractor's office at about 20 years of age, but gave it up soon on account of his lack of coordination. Following this he lived at home, unable to work and with symptoms of chorea visibly advancing. At the age of 29 he was committed to this institution on the ground of his inability to care for himself, being careless and indecent in personal matters and at intervals violent and maniacal. It was said that he had threatened to burn the buildings of his parents and neighbors and had delusions of grandeur, imagining himself to be the possessor of large sums of money with which he intended building houses. He presented, on admission to the hospital, marked involuntary movements of head, neck and shoulders. He was quiet and well-behaved; the choreic symptoms seemed to improve somewhat at first, and he was able to work on the farm for a short period. June 11, 1895, he was discharged improved. At home he was said to have done well for a short time, but soon began to be irritable, desiring to sit apart from the rest of the family and to talk to himself. Jan. 14, 1896, he was readmitted, being expansive

and expressing marked sexual delusions. He presented, on his second admission, considerably lessened choreic symptoms, but had a wealth of delusions of grandeur. Jan. 7, 1897, he was again discharged at the earnest request of his family, and readmitted on the 19th day of the same month on account of an outbreak of violence. He remained thenceforward at this institution until his death, which occurred April 30, 1900. During this last period his choreic movements gradually grew worse and he showed marked symptoms of progressive dementia. Occasionally he would become noisy in reaction to hallucinations of hearing and sight. At times he was presumably too demented to answer questions, writhing and twisting about, not venturing a reply except a staccato guttural of peculiar description. At other times it was noted that he would have great difficulty in swallowing and great care had to be taken in feeding him. It was also noted that a liquid diet apparently decreased the severity of the choreic movements. Two days previous to his death he developed a sudden rise in temperature and a corresponding acceleration of the pulse. His respirations remained fairly regular; he had transitory conditions of opisthotonus.

An autopsy was held five hours after death. A resumé of our records is as follows: Rather tall, well-nourished male body. Slight amount of cyanosis about the ears. Considerable retraction of head and shoulders. Pupils equal. Numerous abrasions, excoriations and scars on legs. Small decubital ulcer over sacrum. Rigor mortis well marked. Scaphoid abdomen. Lividities over dependent portions. Panniculus adiposus scant. Peritoneal cavity free. No fluid. Intestines of normal color. Pericardium contained about 50 cc. clear straw-colored fluid. One irregular milk spot, the size of a dime, on the anterior cardiac surface.

Heart—weight 290 grammes. Considerable whitening of the vessels of pericardium. Heart muscle rather pale in color. Valves of right side of heart enlarged with several mixed clots intimately adherent, one leaf of mitral scarcely admitting small handle of scalpel. No evidences of calcification or atheroma.

Left Lung—370 grammes. Adherent posteriorly, at apex and at diaphragmatic margin. Adhesions removed with some difficulty. Upper lobe crepitates throughout and is soft and doughy.

Lower lobe hyperæmic but expressing air throughout. No areas of consolidation.

Right Lung—340 grammes. In much the same condition as left lung, except for the absence of adhesions and the presence of marked hyperæmia of bronchi.

Liver—1570 grammes. Normal in appearance—well-defined lobules though slightly pale on section. No gall-stones nor apparent increase of connective tissue.

Spleen—130 grammes. Trabeculæ were rather indistinct, otherwise presented no abnormal appearances.

Left Kidney—145 grammes. *Right Kidney*, 160 grammes. Ureters were not distended; the pyramids were exceedingly well marked—apparently considerably congested. Capsule was not adherent and the cortex was about normal in width.

The intestines, pancreas and adrenals presented no abnormal appearances.

Calvarium—340 grammes. The skull was symmetrical, the dura slightly adherent and the sutures well preserved. The sulci of blood-vessels were well marked on the left side, while on the right they were very shallow. The attachment of the dura mater along the line of the longitudinal sinus was decidedly spiral in character. There was a moderate amount of diplöe. The Pacchionian depressions were very deep and directly over the frontal sinus there was a marked fenestrated condition about the size and appearance of the top of a pepper box.

Brain—1005 grammes, with meninges attached 1280 grammes. The dura mater appeared uniformly white, tense and firm to the touch. Upon attempted removal it was found to be tough and elastic. The cavity between the dura and pia was filled with seropurulent fluid and much clotted blood. There was a thick and reddened membrane imposed above the pia which was also thickened and hyperæmic. The dura upon its internal surface presented many whitened elevated portions, these having the appearance of ulceration about their centres. The false membrane was easily removed and was not adherent to the pia, but the pia mater on the other hand had numerous firm adhesions to the cortex, particularly noticeable about the motor area and the basilar portion. The pia mater itself was much thickened, milky and œdematous along the line of the blood-vessels.

TO ILLUSTRATE DR. BERRY'S STUDY OF HEREDITARY CHOREA.

Along the Rolandic fissure the pial meshes were filled with purulent material, greenish-white in character. Microscopic examination of this material at the time of the autopsy proved it to be full of leucocytes and diplococci. Smears and cultures were taken of this fluid and preserved. The convolutions as a whole appeared to be greatly atrophied and especially was this markedly noticed about the Rolandic area. The olfactories were adherent. The cysterna showed considerable haziness. There were no granulations in the 4th ventricle and the frontal lobes were not adherent.

Departing somewhat from the plan pursued by Dana, the whole brain and cord were preserved in 10% formalin, numerous specimens having previously been taken from different parts of the cortex and started in alcoholic fixation with Zenker's fluid. Specimens were also taken from the internal organs in the usual way.

From cultures and subsequent microscopic examination of the bacteria found on the surface of the pia, I have reason to believe that we had to deal with the diplococcus encapsulatus intracellularis meningitidis, though this is in exact contradiction to the established idea that this organism is found only in acute meningeal infection.

The following table of measurements of the cortex were taken after the brain had hardened in formalin.

The measurements are in millimetres.

	This case.	Dana's case.	Clark's case.	Good's case.
Frontal lobe.....	2.48 to 2.50	2.85	2.50	2.71
Temporal lobe.....	2.4	3.1	2.75	2.8
Occipital lobe	2.7	2.1	2.58	2.4
Motor convolutions.	1.55 to 2.38	1.9 to 2.2	2.56	2.49

The spinal cord was removed *in toto*, including most of the spinal ganglia. It was found that the dura mater, in its ventral portion along the entire length of the canal, was markedly adherent and presented a general hæmorrhagic condition of the blood-vessels confined to that portion. The semi-lunar sympathetic ganglia were also removed. The Betz cells of the paracentral lobule stained with the usual methods showed marked pathological changes. First and foremost, they seemed unusually small, being symmetrically shrunken and the contiguous cortex was rich in glia cells. There was a general diffuseness

of the stainable substance, particularly noticeable in the axis cylinders. The nuclei were unusually distinct and in many instances were dislocated, bulging out towards the periphery. There were numerous vacuoles present and in addition to this many of the cells had their processes ill-defined and in other instances as if broken off. There was some pigmentary degeneration though it was not marked. The cells of the small pyramidal layer showed practically none of the above changes; their nuclei, however, were somewhat swollen and were pale, but otherwise they took the stain with great distinctness. Sections from the first temporal and frontal gyri showed marked shrinkage of the processes of the pyramidal cells; they were very diffusely stained and the Nissl granules appeared to be broken up into fine dust throughout the greater portions of the cell, in some instances with large vacuoles completely devoid of stainable substance. The cytological features of other parts of the motor area were much the same, though occasionally there would be found ganglionic cells in fairly normal condition.

With the osmic acid method there was no evidence of fatty degeneration, though with the Nissl method there appeared to be numerous granules congregated, in most instances, at the exit of the axis cylinders. It was evident from subsequent examination of other sections that similar changes to those described before are found fairly constantly throughout the motor and frontal region.

Nissl and Unna sections of the spinal cord showed no pathological changes excepting those one would naturally expect to find as a result of inflammatory origin from the meningeal infection. There were no corpora amylacea in any of the sections and the anterior horn cells were normal. The Weigert and Weigert-Pal methods gave no evidence of degeneration of the tracts of the cord. The nerve terminations in several muscles removed were found to be normal. The sympathetic ganglia showed, with the Nissl and Unna stains, an even distribution and distinctness of the stainable elements, the nuclei did not seem to be displaced and there appeared to be no trace of vacuolation. The spinal ganglia showed no cytological changes. Microscopical examination of the meninges revealed considerable general thickening of the vessel walls and what appeared to be hyaline degeneration of the smaller arterioles. The perivascular

lymph spaces were much enlarged and were often filled with leucocytes.

No bacteria were found within the cortex, being confined exclusively to the preparations made from the surface of the pia and dura mater in the cephalic and spinal cavities. With the hæmatoxylin or safranin stains there was an appreciable augmentation in the numbers of the nuclear supporting structures.

The Purkinje cells showed some shrinkage. Their nuclei were reduced in size and their outlines in a few instances were very irregular; the molecular bodies within the nuclei were somewhat indistinct from the caryoplasm. The neuroglia elements of the molecular layer appeared to be normal.

In recapitulation and from a comparative review of the literature on chorea, I find that the subject has been done full justice, especially very recently in Good's excellent article and resumé. It suffices to say, however, that our case seems to follow the view of practically all writers in that the disease is clearly hereditary. It differs some from the fact that a greater proportion of the male members of the family were affected, though it seems to have developed originally from the maternal stock. The asserted synchronous development of mental aberration, in relation to the onset of incoordination, was not present, so far as elicited, in any of these cases. As in the great majority, the psychic change came on about the time of the onset of involuntary movements and thereafter was gradually progressive in character, though there always seemed to be short periods of remission. Unlike other cases, there was no suicidal tendency, but like others, there was the common mental alienation as displayed in irritability, violent outbreaks of anger, delusions of persecution and grandeur and a sexual aboulia, which symptom is not mentioned by other writers. The pathological anatomy of the case coincides in great measure with the findings of Huber and Greppin, who found hæmatoma, pachymeningitis, and leptomeningitis, though in their cell studies of this condition they seem to only partially confirm the results of my own investigations.

In conclusion, I wish to acknowledge the valued assistance of Mr. T. J. Cummins in making inquiry for the anamnesis, and also in the preparation of many specimens.

A SEMIANNUAL CRITICAL DIGEST OF SOME OF THE LITERATURE ON EPILEPSY.

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INTRODUCTION.

During the past six months nothing especially new has appeared in the field of literature on epilepsy. Instead there seems to have been renewed study of some old problems. The problem of the predisposition to epilepsy, or its anatomical substratum, has not been touched. Histopathological study on the epileptic cortex has made but little progress of late. Indeed the knowledge that artifacts make their appearance so soon after death in the epileptic's brain has discouraged pathological research in this direction.

But the absence of a permanent organic lesion, or any discoverable lesion at all in many cases, has caused investigators to turn their attention to physiological chemistry and the possible solution of the influence of toxic and autotoxic agents upon the production of attacks. The physiological rhythm of nervous impulse and consequent periodicity of epilepsy render much of the investigation within this field of little practical value; *i. e.*, it is impossible to state whether the attacks would or would not have behaved in any particular manner. More attention should be given to the solution of the problem of predisposition, which every investigator in the field of epilepsy is yearly forced to believe is at the basis of the attacks.

ETIOPATHOLOGICAL WORK.

An unsigned review (1) of recent literature on the subject of senile and cardiovascular epilepsy is given us in La Riforma Medica.

Under "Senile epilepsy" various different conditions are de-

scribed. This editorial states that some of these cases represent true epilepsy, while others are symptomatic only. However, results of autopsies show that there is really a distinct variety of the disease which merits the name "senile and tardy epilepsy"; attempts have been made to bring this variety into connection with cardiac disease and arteriosclerosis.

There is much difference in opinion as to when tardy epilepsy really begins. Schupfer describes nine cases of senile epilepsy studied by him in Rome. In all of this series the disease began between the ages of 50 and 60 years. With regard to the question, Were these cases tardy or senile? Schupfer makes no distinction between these varieties. Some distinguished authorities have assumed that all senile epilepsy must be symptomatic. Schupfer distinguishes between general, partial, and rudimentary attacks in senile epilepsy.

An important point in the diagnosis of senile epilepsy is the exclusion of uræmic convulsions dependent on interstitial nephritis. This recalls the opinion of some authors to the effect that a form of epilepsy itself may be due to a defective state of the renal function. Krainsky not long ago claimed that all epilepsy might be due to the formation and accumulation in the blood of carbamates of ammonia. From this point of view there is no essential difference between epileptic and uræmic convulsions.

Lüth studied 12 cases of epilepsy which began after the age of 50 years, and found 3 cases of chronic nephritis. The other examinations appear to have been negative.

A third form of senile epilepsy is syphilitic; while a fourth is due to foci of softening which originate in thrombosis or embolism of vessels, incidental to arteriosclerosis. A fifth type is the apoplectiform epilepsy described by Romberg; this form is said to be confined to the tonic stage and is thought to be due to arteriosclerosis. Finally a sixth form is rudimentary procursive epilepsy.

Lemoine is one of the principal champions of the cardiac theory. He believes valvular lesions may greatly disturb the cerebral circulation and thus bring on the disease. Crocq subscribes to this view. Rosis sees in senile epilepsy arteriosclerosis and diseases of the myocardium. Mendel sees no relation of cause and effect in this association. Matoni explains some cases

of epilepsy by lesions of the heart and vessels, while others he thinks due to irritation of the vagus. In general, it appears that authors take sides on this question, one school denying any causal relation. In these senile cases examination of heart and vessels leads to contradictory results.

Schupfer holds that if arteriosclerosis attack the secondary branches of the *arteria fossae Sylviae* while the trunk of the vessel is intact, convulsions of a cortical character result. If the process extend to the arterial branches in the middle brain, without actually occluding them, we may have both the clonic (cortical) and tonic (infracortical) elements. It must be borne in mind that organic disease of the heart and vessels is frequent in the aged at best, and that epilepsy at that time of life would necessarily often coincide with lesions of this sort.

There are certain phenomena common to all cases of senile epilepsy, such as the vertigo and psychical disturbances, which may precede by many years the development of the convulsions. The aura is usually absent. The initial cry and biting of the tongue are the same as in true epilepsy. Frequency of attacks varies much. The psychical alterations which accompany (and often precede) the disease are especially worthy of note. In senile epilepsy, facial paresis, hemiparesis, etc., are frequently seen; also a certain rigidity of the limbs. Stigmata of degeneration also are frequently noted in senile epilepsy.

In general, authors hold that in senile epilepsy the prognosis is bad, not for life necessarily, but for the intellect. As for treatment, digitalis is indicated rather than bromides. Extirpation of the cervical sympathetic is in theory specially indicated in cardiac epilepsy, but has not as yet produced any noteworthy practical results.

Redlich (2), of Vienna, writing on senile epilepsy, has published an article of monographic thoroughness. We must understand by the title of his subject that it includes not only all cases which begin in old age, but all earlier cases which have extended into the senile period. The number of the latter class is by no means small. Binswanger relates the history of a patient who had suffered since youth from severe epilepsy, yet lived to be 76 years old and died of an intercurrent disease. A similar case is at present under my care. Redlich, however, prefers to limit

his paper to cases of epilepsy which begin in old age. In 1893, Mendel wrote upon senile epilepsy, apparently including under this title all cases which began after the age of 40. In 1352 cases, it was found that about 7½ per cent developed after the age of 40. Tardy epilepsy, as thus understood, is considerably more common in men (about 8 to 3 in one set of statistics).

Many late writers have introduced an element of confusion by reckoning as "late" cases all which begin after 30. Obviously, from a clinical standpoint such cannot be regarded as senile.

Redlich has limited his paper to the study of cases which begin after the age of 60, at which age people are said to be old. In 1450 cases of epilepsy, Gowers found one per cent of this class. It has been claimed that the number of cases of senile epilepsy is large in comparison with the number of people living after the age of 60, so that old age is actually a predisposing cause.

Much space is devoted by Redlich to the distinction between essential and symptomatic epilepsy in the aged, who are prone to so many organic diseases with secondary intoxications (nephritis, diabetes, etc.), as well as to the organic changes in the brain itself (apoplexy, softening, pachymeningitis). The author holds that all these conditions must be carefully excluded before we decide that a case is really idiopathic. An instance is given in which it was impossible to decide between essential epilepsy and pachymeningitis hemorrhagica. In another case of apparent idiopathic epilepsy in a woman, aged 62, autopsy revealed chronic nephritis, arteriosclerosis and a small contracted cyst of the brain. The classing of organic epilepsies with those supposed to be of idiopathic origin is a common mistake.

The latter condition—cyst of the brain—appears to be a specially active cause of senile cerebral epileptiform convulsions, because it is a disease of advanced life. The symptoms so produced are not typical, but we should be particularly alert in excluding this form of symptomatic epilepsy in diagnosis. Thus Griesinger collected 54 cases of "late epilepsy," of which he referred about one-half to cysts. Other noted pathologists, such as Kuchenmeister and Chiari have recorded evidences of this association.

The data in Redlich's paper show that a hereditary taint often

plays an important rôle in senile epilepsy. About one-quarter of all cases show distinct heredity. In genuine senile epilepsy there is at times a history of convulsions in infancy. Chronic alcoholism plays a most important etiological rôle as well. Injury to the head appears to be able to precipitate essential epilepsy, in some cases by mere shock. Acute and chronic infectious diseases, such as malaria and syphilis, are also etiological factors. Other elements entering into senile epilepsy are a high degree of atheroma of the blood-vessels of the brain, arteriosclerosis and valvular heart disease, all of which may act as contributory causes in essential epilepsy. Cardiac and arteriosclerotic epilepsy form a class by themselves, in which benefit is derived from the use of digitalis, caffein, etc., etc., and the bromides appear to be of little use, although Féré has recently proven them of more value than was once thought.

In two cases of senile epilepsy in which an autopsy was held, extensive general atrophy of the brain, chronic hydrocephalus, pronounced arteriosclerosis of the larger cerebral vessels were all absent; in their stead occurred only histological changes, "miliary sclerosis." In a third case, however, this condition was not present.

Numerous others have found this *gliosis* in young subjects as well, but authorities like Binswanger have decided that its presence stands in no definite causal relationship to epilepsy.

In the discussion which followed the presentation of Redlich's paper, Lauterbach stated the influence of organic heart disease in provoking genuine epilepsy was known in Delasiauve's time. Schlesinger agreed with Redlich in his view that heart disease is an important factor in epilepsy, but did not cite any good reason for his faith.

Upon the subject of epileptic equivalents, Schultze (3) refers to a paper published last year by him on "ambulatory automatism," as Charcot first termed it. This affection, as is now well known, consists of a periodical, aimless, irrational desire to roam about. Of the three cases reported, but one had true epilepsy. Nevertheless, the author regarded all as epileptic equivalents from the peculiar make-up of the patients.

As the Germans do not generally believe in the occurrence of bizarre psychical equivalents in epilepsy, the author was only

recently able to find a fourth case similar to his, which occurred in the practise of Notel. Schultze's case is of such interest from a medico-legal standpoint that a short abstract is incorporated in the text of this digest.

The patient was perfectly well up to his 13th year, when he had severe scarlatina, followed by psychical disturbance, "irresistible impulse to wander." He would roam about for several days and then return home of his own accord, "with no remembrance of where he had been." Although he married, his wanderings continued as before. He was not a drinker and worked well between his attacks. While he served in the army he deserted twice, but returned each time. He had to stand trial for these offenses, and as he was pronounced responsible, was sentenced to a year in prison. Later, on two of his wandering escapades, he committed theft. The patient had never had convulsions, but several attacks of vertigo were noted while he was under observation. Before the impulse to wander asserted itself, the patient would suffer for hours with headache, and his behavior would strike his associates as peculiar. The medical testimony during the trial for theft brought out the true nature of the case.

Schultze cites another case who traveled while unconscious, being absent for a longer or shorter time. Schultze saw him on one of these journeys and could detect nothing peculiar about him. Later on, the patient said he had had no recollection of this journey. Westphal, in 1883, gave a deposition in the case of a soldier under trial for purposeless desertion.

Schultze discusses the subject of hallucinations of sight and sound as equivalents or abortive attacks (psychical aura). The subject of "epileptiform hallucinations" is a meager one in literature. Kuhn reported 3 cases in 1883. Berger saw 4 cases and states that the hallucinations lasted but a few seconds. Memory was lost for whatever transpired during the hallucinations. Experience of this sort may be forerunners of true epilepsy. In this connection may be mentioned the "memory-aura" of certain epileptics, who before a seizure appear to conjure up some scene from their past, perhaps some insignificant experience. A third phenomenon of the same type is double vision, due, it would seem, to abducens paralysis (paralytic-

motor equivalent). Periodical oculomotor paralysis is less common. In a case reported by Thomsen, this paralysis was an equivalent, and not an aura of the epileptic convulsions which coexisted. Paroxysmal paralyses of epileptic nature have been reported by Higier, Lowenfeld, Pitres, Féré, Wildermuth and Witkowsky, etc. Schultze cites a peculiar and interesting form of epileptic equivalent in an epileptic girl who had typical attacks and became weak-minded. She had other paroxysms in which she practised "exhibitionism and coprophagy."

Another case is given in detail: After the first epileptic convulsions had appeared, there were sudden attacks of hemianesthesia of the face. The corneal and nasal reflexes disappeared. The first two branches of the trigeminus were involved. This anesthesia would suddenly disappear. On account of the presence of typical seizures, this anesthetic attack could not be referred to an injury of the cortex, nor could it be likened to the exhaustion paralysis which follows convulsive seizures.

While Schultze was preparing this paper he received an account by Donath of epileptic "Wandertrieb" or "Poriomania." The two descriptions evidently refer to the same condition, and agree tolerably well. Donath assumes that the amnesia is constant; while Schultze, who has seen several cases and knows others, states that, while usually a feature, it may be absent. Donath assumes that unconsciousness is implied by amnesia, but Schultze, who had a chance to cross-examine a patient during a wandering attack, came to the conclusion that the patient was then conscious but later forgot all.

Krau's (4) case of epileptic wander-impulse, which we find mentioned in Schultze's essay, is reported in great detail by Krau in a separate thesis. Krau calls it a new phase of epilepsy, poriomania. The case is of such unusual interest that the salient points will be given here.

The patient was aged 22 years. In childhood he was very nervous and eccentric. When about 15 he had suicidal impulses, believing himself bad and worthless. At a considerably later period he made a second suicidal attempt. Letters written by him showed evidence of persecutory delusions, and he admitted being a masturbator. Those who knew him at this time set him down as corrupted by vicious reading, one who hated work and

had a mania for wandering about. He was examined by an alienist, who reported him under the domination of fancies, impulses, etc., but not insane. Periods of pessimism and suicidal mania appeared to follow at regular intervals. He had always drifted about among his relatives and others, but not necessarily because of any particular mania to wander. It appeared, however, that this wander-impulse must have gradually become fully developed.

Early in 1899 he assumed a position in a store, but one day left his employment, went to the police station and accused himself of having indecently assaulted a little girl. It appeared, however, that this was an invention; he having an overmastering impulse to make this statement. He was sent home, but after eight days with his mother, vanished from the town, and, after an interval of wandering, accused himself before the police of robbery and murder, which he described with great detail. After changing his statements at different hearings, he admitted that he was not guilty of his own charges against himself. He evidently imagined the murder as he had the assault on the child. Adventures like the foregoing occupy a number of pages and leave no doubt that the patient was addicted to purposeless and aimless wanderings, attempts at suicide and false self-accusations based on imagined experience. These crises were followed by total loss of memory. The diagnosis of epilepsy was confirmed by the evidence of typical epileptic attacks after the patient came under asylum care.

Krau described this epileptic "Wandertrieb" equivalent as something virtually new in literature; but Schultze, who also discusses it, states that while a rare aspect of epilepsy, it has been alluded to in literature before. (Charcot, and later Féré, wrote upon "ambulatory automatism.")

Fuchs (5), in a paper upon "Sensory Jacksonian Epilepsy," states that Jackson established the existence of this epilepsy by pathological studies; and now we have records of hundreds of cases with the accompanying pathological conditions. Thus far, however, the sensory side of Jacksonian epilepsy has been relatively neglected as compared with the motor aspect. Jackson himself describes sensory attacks either combined with motor, or acting as equivalents of the same, and Gowers also alludes to

them. In the seventies and eighties, hardly any attention was paid to sensory Jacksonian epilepsy. Slight mention is found in Charcot-Pitres, Oppenheim and Monakow. To Jackson himself we are principally indebted for the few details found in standard authors. This meagerness of literature has actuated Fuchs to prepare the present monographic study. From the records of miscellaneous surgeons he extracts now and then something of value.

Numerous cases are to be found in Oppenheim's work, but they are under "cerebral tumors," not "Jacksonian epilepsy." The same author describes sensory phenomena accompanying the epileptiform convulsions of general paralysis; Ballet and Blocq also do the same. Something bearing upon this subject is found under the head "Identity of motor and sensory centers," a subject discussed recently in the American Neurological Society.

All that has been adduced so far refers to a combination of motor and sensory phenomena. Literature contains scattered observations of pure sensible disturbances associated perhaps with subjective perception of sounds and sights. Phenomena of this sort may be associated with migraine, while hystero-epilepsy of the Jacksonian type may have sensory manifestations joined to motor attacks. Fuchs reports a long series of personal observations.

Cases similar to those of Fuchs's are much more frequent than he would lead us to suppose. Féré seems also to think them of extremely uncommon occurrence. I have seen and reported elsewhere four cases of epilepsy with these attendant phenomena (Clinical Studies in Epilepsy).

In an important study upon hereditary syphilis and epilepsy, Bratz and Lüth (6), at Wühlgarten, have made a study of this association from the material of the Berlin Hospital for Epileptics. They state that hereditary syphilis of the nervous system has recently been thoroughly studied by Rumpf, Lang, Kahane, and others. This system is thought to be involved more frequently in inherited than in acquired syphilis.

In studying hereditary syphilitic epilepsy, they maintain the necessity of relying upon specific organic brain lesions; certain non-specific hypoplasias of the brain which syphilis can cause; certain functional peculiarities of the nervous system due indi-

rectly to syphilis and forming a neuropathic disposition, and also the so-called parasyphilitic affections; which term includes everything non-specific which syphilis might indirectly cause by arresting growth, lowering vitality, etc.

Epilepsy in syphilis must be classed with certain cerebral hemiplegias, aphasia, ocular paralysis, idiocy, etc., the rationale being the same for all. In all these lesions the cerebral cortex suffers.

A disease which has peculiar relations to cerebral syphilis is general progressive paresis. It occurs frequently in adolescents who inherit both syphilis and neuropathy, and is characterized among other symptoms by epileptiform attacks. Rumpf states that the great majority of hereditary syphilitic children are destined to become idiots.

The authors, in selecting their material for study, choose only cases of true epilepsy, beginning in childhood and lasting through life. Records of idiot asylums, which contain notes of many cases of epileptics cared for before the erection of special institutions, give the following results: Children without convulsions, 291, of which 15 had inherited syphilis; children with convulsions, 125, of whom but one was hereditarily syphilitic. Of 110 idiots in private practice, Wildermuth found 13 with syphilis hereditaria.

Gowers believes that inherited syphilis may be the sole cause of true epilepsy; Voisin's experience is the same; Féré thinks this association is extremely difficult to prove. Fournier places epilepsies among the "parasyphilitic," or non-specific effects of hereditary syphilis and finds it present in about 4 per cent of cases. Oppenheim says the epilepsy of the syphilitic is purely symptomatic, representing different forms of brain disease. Binswanger attempts to classify syphilitic epilepsies. "The most varied types of convulsions are found in tertiary hereditary syphilis." There is one kind due to specific organic lesions and another to the blighting action of the toxins of the disease (parasyphilitic). More cases must be studied and analyzed before further progress can be made.

The authors have sought in every case for a direct history of inherited syphilis, which could often be obtained from the records of infant asylums. Of the Wühlgarten material, two hun-

dred genuine epileptics could be at once excluded as free from hereditary syphilis.

The three groups isolated at the beginning of this study are: 1. Epilepsy from organic specific lesions of cranium or encephalon. 2. Epilepsy connected with atrophy and sclerosis of the cortex or hydrocephalus. 3. Epilepsy dependent upon a damaged state of the nervous system which predisposes to neuroses of all kinds.

The authors give a number of cases which purport to illustrate the above varieties. Aside from a few cases in which autopsies were obtained, there appears to be no evidence to prove that *these cases were surely due to syphilis*. The authors state, however, that they have conscientiously excluded all cases in which other possible causes might have been operative. Certainly they have struck a very modest, ingenious and novel method of looking at this embarrassing problem of hereditary syphilis and epilepsy.

Ardin-Delteil (7) has published an extensive study on the subject of physical equivalents of epilepsy, as a companion to his former work on psychical equivalents. The subtitle of this paper is Masked Epilepsy (Epilepsia larvata), which is a synonym for physical equivalents. The definition of epilepsia larvata is "a form of epilepsy which borrows for its manifestations characters foreign to ordinary epilepsy, assuming the form of other nosological species." Both idiopathic and Jacksonian epilepsy present equivalents. The psychic equivalents of Jacksonian epilepsy are rare; the physical are common. Physical equivalents comprise motor, sensible, and sensory elements.

Motor Equivalents.—These are divisible into incoordinate, motor, and paralytic. Old authors have described motor equivalents of standing erect, running or spinning around, salaaming, trembling, etc.; but paralytic equivalents have only been noted since 1880, by Hughes, Pitres and others.

Incoordinate Type.—These include tremor, cramps and contractures, laughing or weeping, sneezing, hiccough and cough. These are considered in detail. An equivalent of tremor (teeth chattering) is quoted from Billod. Contracture as a pure equivalent is not known to be illustrated by any particular case in literature, although the author seems to believe in its existence.

Functional spasm has been met with as an equivalent, and a case is given, from Féré, of false writers' cramp. Equivalents of shouting, laughing and weeping occur in literature, and a case of each sort is given. Similar cases of sneezing, cough, hiccough, etc., are known, but no examples are cited.

Coordinate Motor Equivalents.—These are either rudimentary or complex. Falret described a bucco-pharyngeal type, consisting of the motions of chewing and swallowing. Other simple automatic acts are recorded, such as clapping the hands. Almost any simple performance of this sort may be an equivalent. Of more complex acts we have the so-called "muttering epilepsy," or logospasm, or phonetic delirium (cases cited from Cheadle). A well-known complex equivalent is the salaam. Finally comes procursive epilepsy, numerous cases of which are given from authors.

Paralytic Equivalents.—While these are common enough in Jacksonian epilepsy, they are by no means frequent in true epilepsy. Post-epileptic paralyses have been frequently described, but as an equivalent it was hardly known until Wilkowski described a case in 1884.

These equivalents the author divides into paralysis proper, aphasia, and apoplectiform attacks. The first-named occur suddenly. Forms observed comprise facial paralysis, ocular paralysis, brachial monoplegia, paraplegia and even hemiplegia. These paralyses are transitory, being simply equivalents. Numerous cases of aphasic equivalents are found in literature. This subject is discussed by the author at considerable length. As to apoplectiform attacks, they have been known for a long time. Romberg described them in 1857.

Sensible Equivalents.—Under this head are considered also vasomotor and visceral equivalents.

Sensible Equivalents Proper.—These include attacks of pain and other analogous sensations. Cases are given from Charcot and Pitres.

Vasomotor Equivalents.—The subject of vasomotor attacks was first studied by Bernhardt in 1872, but only in relation to the aura. Venturi is the first, perhaps the sole author, to treat of vasomotor equivalents. In this phenomenon there is, first, a sensation of constriction, which is immediately followed by a hot

flush which spreads from a given locality to the head, accompanied by a reddening of the external ear, an obscuring of the vision, unilateral sweating and deafness. The sense of constriction represents a sensory aura. These attacks are never followed by mental hebetude, sleep, etc. Venturi's case is given by the author.

Visceral Equivalents.—All the viscera may be the seat of equivalents. We may have gastric, intestinal, cardiac, laryngeal, asthmatic, urinary, or genital equivalents. Féré and Lemoine have described gastric crises. In the intestinal form there is an urgent desire to defecate. Trousseau describes an epileptic angina pectoris. In 1865 Loupias described a typical case, as did Bernheim in 1870. Salamon and Lecorche published, not long ago, a case of cardiac epilepsy consisting chiefly of paroxysms. Several authors have described crises of slow pulse, probably epileptic. Laryngeal crises have been described by Lefferts, while Schule has reported epileptic asthma. Urinary crises—automatic voiding of urine—and seminal crises have been described. Under the head of "visceral equivalents," the author considers the nervous system. Migraine, of course, comes in for considerable notice, but no other equivalents are mentioned here.

Sensorial Equivalents.—These are visual, auditive, olfactive, gustatory and tactile. *Visual.* Transitory blindness, colored visions, etc., are mentioned, also paroxysms of the type of ophthalmic migraine; amblyopia, visual hallucinations; in this connection is mentioned the so-called "dream state," and a case of Jackson's and Beevor's is given. A woman thought she beheld a little black woman in her kitchen. She fixed her eyes on the apparition and voided urine. Consciousness was retained. There was no olfactive aura. The woman had a tumor of the temporo-sphenoidal lobe. *Auditive.* Many rudimentary sounds and more complex auditory hallucinations have been recorded. The same is true of smells and tastes, and tactile or other perceptions. The author concludes with a speculative chapter and bibliography. This work done by Ardin-Delteil is a perfect treasury of facts and covers the entire field, representing an immense amount of work in looking up the literature of epilepsy. It should prove suggestive to any one looking for opportunities for original work. Similar ground is covered, much more

briefly, but not with the same comprehensiveness, by Schultze, who discusses both physical and psychical equivalents.

Under the title of "Accidents of the Epileptic Paroxysm Associated with Muscular Contraction," Féré (8) states that among these is an asphyxia produced by the violent contractures of the muscles of the neck and thorax. Rupture of the heart has also been seen in the tonic period (Short, Lunies), which is favored by previous heart disease. Teissière has placed on record a case of rupture of the diaphragm and liver in an epileptic, during the tonic stage of convulsion; the patient was convalescing from typhoid fever.

The contracture of the masseters has at times severed the tongue (Aretæus, Turner). Besides lacerations and their resulting deformity, other accidents, such as hemorrhage or extreme swelling of the tongue may occur. Bailly saw a death from asphyxia due to swelling of the tongue in puerperal eclampsia, and Féré cites a case in which the same accident occurred in epilepsy. Contraction of the depressors of the jaw may cause dislocation of that bone. The author cites several cases who dislocate their jaws at each paroxysm of epilepsy. Any of the bones, however large, may fracture during the paroxysm, but this is not a common occurrence. Rowley knew of an epileptic who broke both femurs in succession from the violence of muscular movement in seizures. Charon records five cases of so-called spontaneous fracture (femur 3, humerus 2). His observations, however, are not conclusive enough to exclude the possibility of trauma by external violence.

Féré has seen but one case of abdominal hernia produced by an epileptic paroxysm. It was a right inguinal hernia and in a patient emaciated by phthisis; the opposite ring was the usual normal size. Degenerates of all types are especially predisposed to hernia; but epileptics show fewer cases than one would expect. The author's first statistics showed 6 per cent; his second 9 per cent of epileptics having hernias. Féré reports in detail a case in which the tibialis anticus of the right leg was ruptured during a paroxysm. Hernia occurred at the junction of the middle and lower third, 3 cm. to the outer side of the crest of the tibia. The tumor was the size of an almond and attempts to reduce it produced pain. Spontaneous reduction occurred when the patient

was placed on his back and the legs stretched while the feet were abducted. After reduction an aperture could be felt in the aponeurosis; even the skin could be invaginated into this opening. A similar aperture could be felt in the opposite leg, although hernia of the muscle was not in evidence.

The point of interest in Féré's case was not the hernia, but the symmetry of the aperture in the aponeurosis of the leg. The author in an exploration of the anterior tibial region in epileptics has found on several occasions small, painless prominences, which undoubtedly represented a hernia of the anterior tibial muscle. During the past year two theses have been published on this subject (———, Study of the Muscle-hernia of the Tibialis Anticus, 1899; Momtchiloff—True and False Muscle-hernia, 1899). Accepting these as authority, a true hernia of muscle involves the prolapse of an untorn or uninjured muscle through a torn or thin fascial opening. Féré has tested 204 insane individuals for the presence or absence of this sign lesion. He found these muscular prominences, at least in one leg, in about 15 per cent of cases. Like all anomalies, it is more frequent on the left side. Patients who are examined for this lesion should stand upright, when the prominence will appear. It may be varied by changes of posture, which contract or relax the muscles. The opening in the aponeurosis can be made out by the finger. Most of the patients are wholly unconscious of the presence of the tumor. The author concludes that the principal significance of these foramina in the aponeuroses, permitting muscular hernia, is that they are undoubtedly stigmata of degeneration.

The subject is of considerable practical importance. Undoubtedly many of the apparently hypochondriacal muscular pains of which many epileptics complain after paroxysms are due to contractional injury of the muscle and its sensitive sheath.

TREATMENT.

Fuchs (9), in the course of an article on special psychiatric prophylaxis, says epilepsy stands in such close relationship to degeneracy that the prophylaxis must be exceedingly comprehensive. It is better for an epileptic mother to forbear nursing her children. Eclampsia in early childhood may possibly be avoided through this restriction.

In regard to diet, preparations containing extractives, bouillon for example, must be forbidden. Hydrotherapy, massage and electricity are all valuable as roborants. Bromide is still the leading medicament when one is required, and is best given in Erlenmeyers' tribromic formula. In order to avoid the continuous exhibition of bromides, Flechsig's treatment—bromides, alternated with opium—has rendered great service. As bromide salts tend to supplant chlorine and expel it from the organism, common salt should as far as possible be cut out of the diet, as thereby a more intense action is secured from the bromides and a corresponding reduction of the dose. Most cases of Jacksonian epilepsy originate from cicatrices of the cerebral cortex. Whenever these foci are shown to be responsible for the convulsions and whenever extirpation is possible, the operation should be performed. But we should by all means follow up such operative treatment with the usual bromide medication. Despite the fact that bromides do not always favor the prevention of attacks, thus causing doubt as to the correctness of diagnosis, and the other fact that in some cases, although the convulsions are controlled, the disease really advances, bromide remains the great prophylactic for genuine epilepsy, and when given to the eclamptic child it will usually preserve his mental power from deterioration. Probably most authorities of to-day hold to the general principles which Fuchs lays down.

Donath (10) has written a sketch upon the history of the progress of our knowledge of treating epilepsy, which is not without interest, especial attention being given to progress in treatment during the past few years. Donath states that there has been progress in treatment which answers to the progress in pathology. In 1851, Locock and McDonnel introduced the use of bromide of potash. While the majority use moderate doses, Féré believes in high doses (up to 30 gm.) associated with a regimen to prevent bromism, intestinal antisepsis, frequent baths and spraying the skin with boric acid solution.

Fürstner emphasized the worthlessness of bromides in hysteria and organic epilepsy. As the latter occurs chiefly in the young from past encephalitis, Wildermuth frames diagnostic rules for detecting old encephalitis (heightened reflex on opposite side). In epilepsia tarda, not due to old encephalitis, Fürstner recom-

mends bromides. Genuine epilepsy in childhood demands a systematic employment of bromides. Fürstner has seen permanent cures when a child is thus treated up to puberty.

Toulouse's hypochlorization is described with approval, but the author regards the introduction of strontium bromide as the greater advance of the two. Donath agrees fully with Laborde and Culbinas in believing the strontium compound of the greatest value.

Flechsig's opium-bromide treatment did not realize the expectations which were based upon it. It has several warm partisans still. Schroeder, who has made an elaborate study of the method, believes it is indicated only in the young and in recent cases. In many cases the Flechsig treatment has done much harm and has probably caused numerous deaths from heart failure, while in many instances the convulsions have been intensified. The method has been very extensively tried and with most conflicting results.

Donath takes up Bechterew's adonis vernalis treatment (adonis and potass. bromide varied with digitalis and sodium bromide). These combinations must be given steadily for two or three years. The principle involved is the action in tranquilizing the circulation and promoting diuresis, which keeps the toxic matters eliminated. By this method Bechterew and also Spinhager have produced permanent cures. Donath prefers the Bechterew formula to simple bromides, and especially to the Flechsig treatment.

With regard to bromalin and bromipin, Donath states that years ago he attempted to introduce an albuminate of bromide into practice. Remedies of this sort are believed to be less toxic, less irritant, more assimilable, etc. Favorable results have been obtained and the theory of the action of these remedies is sound.

Amylene hydrate has not proved itself of value; but Ackermann states that after an ineffectual course of this substance, or Herpin's powder (zinc and belladonna and valerian) or atropin alone, a return to bromides has been attended with an unusual degree of benefit. This fact suggests a possible explanation of the benefit received from Flechsig's treatment. On the other hand, amylene hydrate has proved to be of the utmost benefit when given in enemata in the status epilepticus. As no author is

quoted here, Donath probably refers to himself. The benefit was derived in a series of 41 cases. "Brilliant" is the word used by Donath to characterize the results. Methylene blue has been lauded by a single writer only, Guiseppe, of the Lucca Insane Asylum. Toulouse used ovarin with good results in cases of epilepsy dependent on amenorrhea; while erysipelas toxins are said to act like an attack of erysipelas itself, which has been known to suspend epileptic paroxysms (Emmerich and Scholl).

Wislocki introduced the milk regimen, which includes milk, white cheese, koumiss and kefir. Those who cannot stand the milk regimen do well on a vegetable diet. In both of these diets the toxalbumins and leucomaines are kept down in amount. Donath related the case of an epileptic who bit his tongue so often that he was forced to live on milk, which was of much benefit. The milk diet may be used while bromides are suspended.

Cabitto, who found the sweat toxic, used hot-air baths for the treatment of epilepsy, in association with intestinal antisepsis, lavage of the stomach and diuretics. He claims benefit.

When there is an intellectual aura, Roskam recommends psychical measures, such as concentrating the mind or carrying out some complicated action.

Surgical Treatment.—Bojdanih, in 1893, first removed the stellate ganglion. While surgeons have advocated this intervention, epileptologists have seen no benefit of any sort from it. Varanoini has recently collected notes of 65 cases of sympathectomy for epilepsy. He claims 38 per cent of cures and 18.5 per cent of improvements, but the observation periods are much too short.

Much space has been devoted to trephining, which does best in traumatic epilepsy when not of too long standing (under three years). Psychical equivalents following trauma constitute an interesting indication for trephining, which under certain circumstances produces good results. Kocher has recently introduced a new method of closing the trephine opening. He thinks all the benefit which follows trephining is due to puncture or incision of the dura, the removal of bone splinters, etc., acting synergistically. During an epileptic convulsion there is an

increase of brain pressure, the convulsions ceasing after the cerebrospinal fluid drains away. Since 1880 Kocher has abandoned the bony occlusion of the trephine opening in order to prevent an increase of intracranial pressure. In this way he obtained permanent cures in six cases. Kocher's paper, read in 1899, was discussed by Bergmann, Gussenbauer and Lauenstein. They did not attach as much importance to the question of pressure as does Kocher; while from the experimental point of view, Navratil and Arndt investigated the intracranial pressure of epileptics by lumbar puncture, with the result that the pressure is not higher than normal before a paroxysm, and increase in pressure is a result, not a cause. This is also true of convulsions in the hysterical and paralytic. As far back as 1889 Ballet tried dural incision with negative results.

It is known that all blood-clots, injured cerebral tissue, and spiculæ of bone must be removed and depression of the skull bones corrected with eventual removal of cicatrices and adhesions. All this requires wide openings with large trephines completed by bone forceps.

Eulenberg and Koch advise against trephining degenerate individuals, as the trauma has probably only lighted up a preexistent neurosis. We must be on our guard against operating on hysterical Jacksonian epilepsy which may be cured by suggestion.

The question, "Should epileptics marry?" has recently been discussed by Gowers. The chances of handing down the disease should be carefully studied, and these depend on the characters of both patient and disease. If the former does not come from a neuropathic family and if his disease is symptomatic, there is little likelihood that he will transmit the disease to posterity.

Donath's summary is the work of a practical epileptologist, and is the only article of the sort encountered during the past three years. It should therefore possess considerable value. While the material experience is not new, the arrangements, comments and record of personal experience are novel.

Biro (11), of Warsaw, gives the results of 8 years' experience in the treatment of 185 epileptics. In treating epilepsy Biro holds that general hygiene and prophylaxis come before drugs. Cases have been radically cured by persistent rest in bed, and

rest is of the greatest importance in the general management. Exercise, active or passive (massage), is contraindicated. Mild hydrotherapy may be allowable, but not the cold douche. Biro is unable to come to any final conclusion as regards electricity, howsoever applied. Alcohol and tobacco are contraindicated, as well as a diet in which meat predominates. Vegetable diet has long been prized, and a milk diet will cause improvement, but never cure, and exceptionally patients have become worse under it. As occupation-exercise requires great efforts, it would appear to be contraindicated, and should be reserved for the robust (Biro refers to gardening and fieldwork). These objections do not hold good for occupations like modeling, designing, etc. When a case does not yield to general hygiene, we must resort to drugs, which are indeed necessary in all cases in which attacks pass a certain degree of frequency (two or three months).

Biro limits his tests to cases which have been under treatment 5 years. Good results have been obtained by several methods. The fact is well established that after stopping a remedy, the seizures become worse than ever. With regard to bromides, owing to the frequency of interruption, but 53 cases are eligible for statistics. In 10 of these, after one year's use of bromides, convulsions had not reappeared in 3 years, while two others went 5 years. Nine cases were improved, the attacks decreasing in frequency and intensity. The percentages of many other authors do not appear to compare with Biro's results, although the latter are inferior to those of Gowers and Voisin.

Biro then discusses the form of bromide given by well-known authorities. He does not here state the salt and dose which he prefers. When bromides fail he has tried the Flechsig method. In some cases which resisted the Flechsig treatment, Bechterew's combination was employed. Only one is mentioned in which much benefit resulted. It failed to benefit one patient who later did remarkably well on bromide alone in moderate doses.

Trousseau gave belladonna for certain phenomena which accompany the paroxysms, such as enuresis, while Jackson uses the same remedy in nocturnal epilepsy. Féré pushes belladonna to the intoxication point. The author got one good result with the drug, in a case which had proved refractory to the bromides and the Flechsig method. The patient has been free from at-

tacks for 2 years. Biro sums up this: Use bromides first, and if these fail use the Flechsig formula. If the latter fail we may use atropine, or bromine combined with antipyrin.

De Fleury (12) has seen many cases in which suppression of alcoholics and of fermentable food with substitution of the milk diet or milk-vegetable diet, and lavage of the stomach, have completely or almost totally suppressed epileptic attacks. This management is especially indicated in dilated stomach, atonic intestines, congested liver, and urine containing indican and sulphocarbolates.

De Fleury's diet is as follows:

Articles allowed: Toasted bread; boiled eggs; omelet cooked rare; lean bacon; light kinds of fish (sole, etc.), broiled or boiled; meats, white and red (veal, poultry, mutton, beef), broiled or roasted, underdone, in moderate amount during the day, and very small quantity in the evening; green tender beans; artichokes with white sauce; clear soups; potatoes; lentils; green peas; salads of watercress, chicory, lettuce, celery, etc. Drink only one or two glasses of claret with meals, or a little plain or mineral (non-gaseous) water. Drink nothing during the hours of digestion, but when the stomach is empty drink four or five glasses of alkaline or diuretic mineral water.

Light laxatives frequently repeated (cascara), taken in the evening, to obtain a stool in the morning. After this has occurred, flush out the colon with 3 or 4 liters of boiled water to which has been added a little glycerine. When bromides do not control the convulsions, use enemata of chloral. De Fleury prefers the bromide of sodium, especially if salt is eliminated from the diet. By using methodical nervous stimulation (douche, sparks from static machine, friction, massage, etc., etc.), the average daily dose of bromides may be cut down from 6 or 8 gms. to 2 or 3 gms. A still more useful adjuvant to the bromide treatment is the salt solution injected hypodermically every second day.

A series of papers has appeared on the Toulouse anti-salt treatment of epilepsy which promises brilliant results. At least it will prove a great adjuvant to the bromide treatment which it was primarily intended to supplement and aid.

Toulouse (13) devised the word *metatrophic* to characterize this method of modifying nutrition (withholding salt, etc.) and be-

lieves that this principle may be made of general utility in medicine. Since the first article was published, Lenossier has shown that Nencki and Simanowski experimented some years ago upon dogs along the same lines. It has been found that bromide does not behave in the body like an alien substance, and after bromizing dogs, more bromides than chlorides may be recovered from the tissues. A most interesting fact is that under certain circumstances bromhydric acid may replace chlorhydric acid in the gastric juice. There can be no doubt that if the organism is starved as to chlorides, bromides will be taken up in their stead with economy of dose in the case of epileptics.

Toulouse asks "What is the alimentary value of the salt which is withheld?" and replies, "We do not yet know." Large vegetable eaters, like farmers, consume much salt, while nomadic people living largely on flesh eat but little. Numerous tribes of hunters never salt their food. In a vegetable diet, the large amount of potassic chloride which is ingested displaces sodic chloride from the body and both are eliminated side by side. The blood therefore becomes poor in chlorides and there is a natural craving for common salt. In a flesh regimen this does not obtain. Toulouse has not yet seen any ill effects to nutrition from withholding salt. As a rule, the weight and strength were the same as in other persons.

Charrin found that animals which received an excess of salt were more resistant to certain germs. Ought the converse to be true? Meat-eating men and animals, ingesting but little salt, are robust and resistant. In Toulouse's experiments there is no loss of mineral, but only a change. Toulouse devised a diet which should keep the daily amount of salt down to about 2 gms. per day. An equal amount of bromide of sodium was given. In every patient the attacks diminished in frequency, not only major attacks, but vertigo as well. The bromide alone is hardly enough to cause such an influence in such a small dose. Hypochlorization without bromides, and bromides with ordinary diet, did not produce improvement of this sort; hence Toulouse is firmly convinced of the efficacy of the association of the special diet with the small doses of bromides.

Roux has recently verified Toulouse's results, using the milk regimen with bromization. The milk regimen is virtually a

hypochlorization. Similarly a vegetable diet is, as already said, a diet of hypochlorization (Bunge). The toxic power of bromides keeps pace with the therapeutic action in Toulouse's scheme of treatment. He does not deny that the usual phenomenon of bromism appears despite the reduced dose. As a crucial experiment Toulouse abruptly added salt to the diet, and the number of attacks increased.

SUMMARY.

Régime of Hypochlorization.—The milk regimen is a simple way of carrying out the diet, but most patients do not like it. If used, 3 or 4 quarts are allowed in 24 hours. It is of course not necessary to place a patient on the minimum salt diet. As much as 5 gms. daily may be taken in food, and the diet will still be one of relative hypochlorization. The amount of salt in the diet may easily be varied.

Bromization.—If a patient is on full doses of bromides when the diet is begun, we must reduce gradually by 1 gm. of bromide daily until we reach a minimum of 2 gms. It is well, however, not to go to extremes of any kind until necessary. Thus we should see what can be accomplished with a daily amount of 5 gms. of salt and 4 gms. bromide. If the attacks are not controlled, these amounts may be varied, the one increased and the other diminished. An extra gm. daily of bromide may make all the difference possible in the number of attacks. After some time the proper dose for the patient can be determined. When improvement is assured, it is possible to run the salt up to 10 and 15 gms. daily without a return of the attacks. It is a question how long should this treatment be kept up. Toulouse's patients have used it for 7 months with excellent results. Bromism must be avoided; when the hebetude appears, the patient should be purged and placed on the salted milk regimen (3 gms. of salt to a liter). The drug should be suspended, but for a few days only.

Toulouse does not give bromides when the temperature is above 38.5°, as he finds a fever of this degree to be an antidote to epilepsy. With regard to the bromide salt, Toulouse adheres to the sodium throughout.

Näcke (14) has also written upon the dechloridizing treatment

of Toulouse and Richet. Last May, Näcke paid a visit to Toulouse and studied the case-histories and charts of the latter. The sudden improvement shown by the seizure curves he regards as nothing less than wonderful. In some cases the curves show that attacks reappeared, but in others the improvement appeared to be continuous. When the treatment is discontinued the seizures reappear, but it is possible that perseverance in the treatment might lead to permanence of cure.

It is quite probable that this new form of therapy can find application outside of epilepsy. Very promising in theory is the outlook for the iodide treatment of syphilis in connection with hypochlorization. The aim of the author in contributing this short article is to earnestly request all epileptologists to give the Toulouse method a fair trial. It is interesting to note that the well-known psychiatrist Vaschide went to see Toulouse for the purpose of studying the epileptic paroxysms; but he reported to Näcke that his visit was unprofitable, for such were the therapeutic results obtained that he saw hardly any attacks during his stay. Näcke appears to be highly enthusiastic over the method. It is so novel and yet simple, so rational and sensible, so easily carried out, and so effective, that it appears to be a great advance in our therapy. Näcke believes, nevertheless, that it would be difficult to carry out in private practice, because of the great " salt-hunger " of many individuals, especially in Germany, where salt is thickly strewn upon bread and butter.

Roux (15) has applied the treatment of Toulouse and Richet to four epileptics. He holds that in hospital treatment there is only one way of accomplishing this, viz., the milk regimen, which secures a considerable diminution in ingested chlorine. Roux's cases were examples of typical epilepsy. They were put on the milk, watched carefully, and received besides 3 or 4 gms. of sodium bromide daily. The results were most satisfactory; in a few days the attacks diminished in intensity, became less frequent and wholly disappeared.

Roux wondered if there was more in the milk diet than a mere withholding of salt to get such striking results. The author believes that this secures intestinal antisepsis, preventing the formation of toxic substances. Roux tried the experiment of giving the patient last mentioned an extra amount of salt in

connection with the milk and sodium bromide. She took, on consecutive days, 6, 8 and 10 gms. of free salt. On the third day the crisis reappeared with great violence. The extra salt was suppressed and the crisis did not reappear. Therefore the benefit of the milk regimen was thought to be due to the salt. Unfortunately the matter demands much further investigation before we can be positive in this conclusion.

Toulouse's (16) paper on "The Treatment of Epilepsy by Bromides and Hypochlorization" was read before the Société des hôpitaux, Jan. 12, 1900. This second paper, however, provoked a discussion, as follows:

Rendu. These results are very interesting; when we think of our helplessness in treating epilepsy the results are surprisingly good. But is there anything curative about this treatment? Will not the attacks reappear afterwards? *Merklen.* When chloride of sodium is in excess in the blood, does this result in irritation of nerve-elements with precipitation of neuroses? I have found hyperchloruria in neuroarthritides during paroxysms of neurasthenia of the pulsatile type (with cardiac and vascular palpitation). At such times analysis of the gastric juice showed hyperchlorhydria. *Dupré.* Was the urine examined to verify the existence of hypochloruria? It would also be of interest to measure the toxicity of the serum and urine during hypochlorization.

Toulouse replied that Merklen's question was quite new to him. In answer to Rendu, he admitted that although there had been 7 months' immunity owing to treatment, attacks had returned on suspension of the regimen. He did not know whether there was anything to be hoped for in the way of cure if the regimen was persisted in indefinitely. With regard to the urine, the proportion of chlorine to bromine remained almost unchanged throughout.

Linossier believed that Toulouse's interesting results were susceptible of a very simple explanation. Some years ago Nencki and Schumow-Simanowski showed that bromine could be substituted for chlorine in the tissues. After only ten days of bromine treatment they found more bromine than chlorine in the tissues of a dog. In the kidneys and bone-marrow the proportion was 2 to 1. The bromide is not to be regarded as a foreign

substance, but as a true mineral constituent of the tissues. When the bromine is discontinued, it becomes in turn replaced by alimentary chlorine, but it is four months before it is completely eliminated. It is evident, then, that bromine may partly replace chlorine chemically and physiologically as well. A good example of this sort is found in the gastric juice. In a bromized animal the latter secretion has part of its chlorhydric acid replaced by bromhydric acid.

An organism impoverished in chlorine has all its tissues greedy to take up chlorine, and perhaps bromine as well. If the salts are now exhibited they do not immediately appear in the urine because first taken up by the tissues. Thus bromides would also be taken up with avidity and economically. *It is the bromide which is fixed in the tissues which produces the therapeutic effect and not that which circulates in the blood.*

An interesting question is, "What could be done with the iodides plus hypochloruration?"

In an article upon the Surgical Treatment of Traumatic Jacksonian Epilepsy, Graff (17) states that a stage of pessimism succeeded to the optimistic views of the curability of traumatic epilepsy by operation. At present we have a few rays of light illuminating a dark subject.

The careful statistical table of von Bergmann and Braun shows a total of only eight cures out of several hundred cases. Since then other surgeons have published more favorable figures.

Von Bergmann claimed that the shorter the interval between trauma and convulsions, the better the prognosis. If this is true, there are certain exceptions. No one has studied this entire subject with more earnestness than Kocher. Operation upon these cases, he says, is of benefit because of the resulting lowering of intracranial pressure. Experiments leave no doubt that there is a relationship between epileptic attacks and intracranial pressure. But Graff has carefully gone over these experiments and cannot corroborate the findings of Kocher and his pupils. Increase of pressure and hyperemia are not enough to account for epilepsy; if they were, we should have convulsions in many organic brain diseases. Kocher has invariably found a state of chronic œdema in the pia and arachnoid in the course of his operations; in certain cases there was also dilatation of

the lateral ventricles or cysts containing cerebrospinal fluid. In all his cases he has endeavored to drain off this excess of fluid, and this precaution may explain why his results are superior to those of other operators. In cases which relapse he demonstrates that bony occlusion of the trephine opening had interfered with this drainage. In a series of 11 operations, Kocher obtained 6 radical cures.

With regard to the opening to be made, it is better not to attempt to localize too closely the "exact" method; but to make a wide opening to make allowance for the "individual variation" which is known to occur. The exact technique of operation may be omitted, as of interest chiefly to a few operators. After the interference an important principle arises as to the policy of leaving a ventilating opening, as practised by Kocher. The author is unable to decide this point. Kocher's results, of course, speak in favor of a patent opening. By the old method of closure he got but 14 per cent cures; but under his special technique (splitting the dura, etc.) his percentage of cures ran up to 54.7 per cent. The best results came about in cases in which adhesions could be separated. Under such circumstances Kocher's percentage of cures was 88 per cent. It appears safe to say that the more radical the interference the better the result, as the actual exciting cause is more likely to be found.

Upon what sort of cases shall we operate? Many factors may be named, the more severe the case, and the more rebellious to non-surgical treatment, the shorter the interval between injury and convulsions, the more evidence of anatomical lesion, etc., etc.

Braatr's perforator, Gigle's saw, and other modern instruments have supplanted the old trephine and chisel.

In conclusion, I believe the Toulouse chlorine starvation treatment is rational and bound to form a permanent part of the future treatment of epilepsy. I have seen it of benefit in two of my own cases in a trial of nearly a year. Only a careful test of the method lasting several years in a large number of cases can prove its exact value. As to the surgical treatment of epilepsy, honors seem about even between those holding contending views of its efficacy.

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Notes and Comment

A Hospital for the Insane in Palestine.—A few years ago Mr. Theophilus Waldmeier, the founder and superintendent of the Friends' Mission on Mount Lebanon, directed his attention to the needs of the insane in the Holy Land, and, though advanced in years and identified with his particular mission field, consecrated the remainder of his life to an effort to establish a modern institution for their relief. He visited Europe and America, appealed to the charity of all nations, set forth plainly the facts which impelled him to take the step, and described the methods of treatment prevailing in the East, which were based upon the theory of demoniacal possession, and were crude and cruel in the extreme. In the Journal of Insanity for July, 1897, the descriptions given by Mr. Waldmeier were reproduced, and his plan was outlined. He wished to construct a modern cottage hospital, the blocks of which were to be provided by the different nations, and he asked of Great Britain an appropriation for the land and administration house, and of America, Germany, Switzerland and Syria that they construct cottages for patients.

It is with great satisfaction that the Journal announces the success of Mr. Waldmeier's scheme, and the formal opening of the Lebanon Hospital for the Insane on August 6, 1900. The Director, Dr. Wolff, is an accomplished specialist in nervous diseases, with a European education. The nursing staff consists of Deacons and Deaconesses from Europe and some young men and women from Brumana who will learn to nurse the insane. The first patient received was a young girl of sixteen, "degenerated nearly into an animal, from bad and cruel treatment." On the 16th of August there were nine men and five women under treatment. Among these fourteen patients were one Jew, one Mahommedan, two Protestants, one Catholic, Greek Catholic and Greek Orthodox.

A second report of the state of the work with a subscription list and full account of the income and expenditures is about to be issued in London. It will show that the land and three buildings have been paid for, leaving a balance in hand of twenty-four pounds, and that of the fund forwarded for maintenance all has been exhausted. The report will close with the following statement and appeal:

"Dear old England is exhausted in warfare and can do but little. Switzerland has paid for one house, which is quite enough. Germany did not do much. Syria and Holland cannot do much. We shall do our best to make the Asylum self-supporting in future, but this is not possible for the beginning; we need now the help of our friends, *and we need this help at once.* We therefore implore you, dear friends, do not let us sink, but stretch forth your right hand of Christian fellowship and give us a lift up, and do not become weary in well-doing, for in due time you will reap if you faint not."

An appeal in such a cause and from such a man should not pass unheeded, and America should make fitting response. By the energy of Mr. Waldmeier, the Society of Friends is for the third time identified with the relief of the insane. The work begun in Philadelphia in 1751, fostered and emphasized in England in 1792, has its proper culmination in the Holy Land in 1900.

"Dotards" in Hospitals for the Insane.—Physicians in charge of institutions for the insane have sometimes complained that, owing to the popular prejudice against "madhouses," the friends of the insane often delayed their commitment until too late for them to receive the full benefit of treatment. At present, the contrary complaint is more often heard, that there is a widespread disposition to commit unsuitable persons, in order to obtain relief from the burden of their support. The most numerous class in regard to whom this objection is made is constituted by the subjects of senile dementia. In the State of New York, if we understand the reports of the Lunacy Commissioners aright, they are excepted from the declared policy of the State of assuming charge of all its insane, and excluded from the benefits of the State hospitals. Is this an example worthy of imitation?

There can, of course, be no question that, from the economical standpoint, such a course presents decided advantages. Patients of this class are entirely unproductive, and their care involves more labor and expense than that of the average insane. Moreover, their presence in hospitals diminishes the ratio of reported recoveries, and adds to that of deaths, in the annual reports—circumstances that can hardly be expected to be agreeable to those who issue those interesting documents. It is alleged that they are not, properly speaking, insane; that they are incurable; that they occupy room that is needed for more hopeful cases, and that they ought to be cared for at home.

The question whether "dotards" should be called insane or not is, of course, a matter of definition. If we assume, as was formerly done by many, and may, perhaps, still be the opinion of some, that insanity is a specific disease of the brain, this position would be tenable. Senile dementia is not, evidently, the same disease as acute mania, if there is such a disease as the latter. Neither is general paralysis the same, nor the mental derangement so often associated with epilepsy. Neither, in the opinion of many who have given attention to the matter, are any of these identical with paranoia, or primary dementia. As far as we are aware, all recent writers treat of senile dementia amongst other forms of insanity, without any apparent suspicion that it does not belong among them. To those who believe that insanity is not the name of a disease, but of a class of symptoms associated with a great variety of morbid conditions, it would seem difficult to find any reason for excluding from it a class of cases that certainly present these symptoms in an extreme degree.

It must be admitted that patients of this class are incurable. Unfortunately, all hospitals for the insane are in fact, whatever may have been the theories on which they were established, principally occupied by incurables. There is no use in shutting our eyes to the fact that, with our present knowledge and therapeutical resources, the immense majority of persons admitted to hospitals for the insane are hopeless from the start, and that a large proportion of those discharged as recovered are so only in the sense in which an epileptic might be said to have recovered in the interval between his convulsions. Moreover, it may

be doubted whether the mere fact of incurability is, for the average hospital superintendent, an insuperable objection. There is to be found, in most institutions for the insane, a class of incurable patients who come and go about their daily duties without attendance, and perform without wages the work of employees. If we are not mistaken, superintendents have been known to pass over patients of this class in arranging for transfers to institutions specially intended for the chronic and, supposedly, incurable insane. It is equally true of this class of patients as of "dotards" that they occupy room which, in case of overcrowding, may be wanted for acute cases, and it is often, at least, true that they could be cared for without special difficulty elsewhere.

Whether such patients should be cared for at home is a question in regard to which it is impossible to generalize. In many cases the circumstances are such that it is clearly impossible, and the only alternative to the hospital is the almshouse. In a very large proportion of other cases there can be no doubt that the patients are more comfortable, and in every way better off in a well-ordered hospital than they can be made in their own homes. Many others can be made happier at home than they could be elsewhere, and it is undoubtedly the duty of their friends to keep them there, provided it can be done without too great hardship to themselves. This is equally true of many other chronic insane. A bedridden senile case does not differ in any important practical respect from a patient in the last stage of general paralysis. Most hospitals could materially improve their vital statistics by discharging all their patients who become physically too feeble to be capable of doing damage.

We do not remember to have noticed any indignation on account of the inhumanity of confining senile cases in hospitals on the part of the physicians in charge of private institutions. We suspect that there are few of them who would refuse to receive a patient presenting the symptoms of senile dementia in any very pronounced degree on the ground that he was an unsuitable case for hospital treatment, provided the pecuniary arrangements were satisfactory.

Insanity and Genius.—Trouble invariably awaits the man who delivers himself on the subject of genius, especially if he be

rash enough to discuss its morbid aspects. Genius has many champions and genius is sensitive. The latest offender is Mr. Treves, the distinguished London surgeon, who, in a lecture to medical students, is reported to have said that "genius was some form of neurosis, an untabulated nervous disease. The few persons of genius he had known had been exceedingly impossible persons, and if there was one profession where genius was out of place it was the medical profession. The thing which in that stood above all else was hard work, and one very peculiar faculty, that of close observation." There are few alienists who would not give ready assent to Mr. Treves' pronouncement. From the earliest times—as far back as Plato and Aristotle—it has been noted how often men of genius exhibit morbid mental symptoms, and in our own day Mr. J. F. Nisbet has exploited the association quite thoroughly.[1] But the *London Spectator*[2] waxes wroth at Mr. Treves, is as indignant, in fact, as if he had declared that all men of genius are madmen, whereas we take the surgeon's opinion to be the now accepted one among members of our own profession that transcendent mental gifts, however desirable and useful in themselves, are usually obtained at the cost of mental and nervous poise. After all, what we are wont to call the well-balanced man or the good all-round man is not by any means a genius, but, on the contrary, is chiefly distinguished by his commonplaceness. One could always depend upon Huxley to brush away all sophistries from questions of this sort, and what that great scientist said of genius is much to the point: "From a biological point of view, I should say that a 'genius' among men stands in the same position as a 'sport' among animals and plants, and is a product of that variability which is the postulate of selection both natural and artificial." Arguing that a strong and therefore markedly abnormal variety is, *ipso facto*, less likely to be in harmony with existing conditions than the normal standard, he thought it "probable that a large proportion of 'genius sports' are likely to come to grief, physically and socially, and that the intensity of feeling which is one of the conditions of what is commonly called genius, is especially liable to run into fixed ideas which are

[1] The Insanity of Genius.

[2] July 28, 1900.

at the bottom of so much insanity." Neither is the *Spectator* happy in its selection of "exceptionally sane and competent men" who, although geniuses, were "not victims of neurosis." Take Charles Darwin. "For nearly forty years"—so wrote his son—"he never knew one day of the health of ordinary men. . . . . His life was one long struggle against the weariness and strain of sickness." He had his "bad days" when he suffered from "swimming in the head," and he had a peculiar stammer on the first word of a sentence.[3] Again, can it be said of Goethe, Napoleon and Mendelssohn, whom the *Spectator* instances with others, that "saner men never lived, or men with quieter nerves?" Goethe had a bad heredity. He had, at least on one occasion, and himself described, a visual hallucination of a spectral figure of himself on horseback, and possessed a faculty of visualization curiously akin to hallucination.[4] Napoleon, an epileptic, was certainly not a man of "quiet nerves," And as to Mendelssohn, no family, upon the authority of Rockstro, his biographer, could well have been more neurotic than his. Teratological defects abounded in the strain, handed down to Felix, in inexorable sequence, from the hunchback, stammering, neuropathic grandfather, Moses Mendelssohn. "Sometimes I have a feeling like this," Felix Mendelssohn remarked to Rockstro, twisting his hands rapidly and nervously in front of him—"and when that comes I know that I must write," which is hardly the physical and mental expression of "quiet nerves." Nor is the *Spectator* on safe ground in citing Alexander the Great as a genius "apparently independent of the application and experience so indispensable to their fellows." It may not indeed have been "experience" that made the son Philip of Macedon so impressive a conqueror, but he can hardly have been other than a neuropath. The *Spectator* says of him that, if we except the younger Pitt, he was the only great man in the world's history who had a great man for his father. Granted; but there is abundant evidence that both father and son were "a bad lot." Philip was violent in temper, a notorious drunkard, a debauchee; his wife was a dissolute, unbridled woman. With such parentage Alexander was naturally enough addicted

[3] Loc. cit., p. 238.

[4] Loc. cit., pp. 141, 168, 196, 287.

to orgies, in one of which he died. What was his wry neck if not a neuropathic taint? Moreover, his brother, slain by order of his mother, was an idiot.

So, therefore, we return to Mr. Treves and express emphatic assent to his proposition that a well-ordered mind with "hard work" and "close observation" are what count, while genius—*maladie mentale qu'on appelle génie*, as Lamartine called it—is at a discount. *In medio tutissimus ibis* is a safe motto, not only for the individual, but for the species. Nature puts not her trust in princes—not in extremes or accidental variations. Medicine cries aloud for men that are distinctly sane. Not that we deny genius its rôle, or its victims their useful functions. In the self-complacency of their own commonplaceness, mediocre men may brand the "genius sport" as cracked, albeit it is well for us ordinary mortals to bear in mind the ample compensation that is his and ours alike, namely, the usefulness of those selfsame *cracks* as media through which, as someone has cleverly put it, the world has oftentimes been flooded with enduring light.

THE MARRIAGE OF THE UNFIT.—There can be no doubt that, so far as the marriage of defectives is concerned, our specialty of mental medicine stands in sore need of a propagandist like Jeremy Bentham to proclaim the ethical doctrine of utility as a test and measure of virtue. Deontology is nowadays a wofully neglected science. The reason for this neglect lies on the surface. Reserve and forbearance being qualities that belong to the higher civilization, not only do we encourage, under a democratic form of government, the pursuit of happiness according to the dictates of individual taste and inclination, if so be the free-born citizen keeps within the written law, but we go further and often frown upon and stigmatize as a meddler him who would impose a check upon a disaster-bringing arbitrariness of preference and judgment. Moreover, too many of us—all perhaps—live too precariously under glass to make stone-throwing a safe procedure. Lacking thus the courage of conviction, we become moral cowards in the presence of a giant social evil. Perhaps there is no department of preventive medicine in which the consequences of that cowardice are more apparent than in our supineness with regard to engagements and marriages on

the part of persons known by ourselves to be unfit to bring children into the world. Bolder far than his brethren, Dr. Harry Campbell, of London, came to the front a year or two ago with an essay in which he took the strong and safe ground that "the responsibility of making a life is scarcely less tremendous than taking it." Nevertheless, indisputable as that proposition is, but few of us appreciate the obligation of our profession to proclaim the solemn truth from the housetops, each with his own megaphone, and do each what he may to enlighten the public conscience and promote the public weal. It will be many years before that prescient novelist's, Robert Buchanan's, forecast will be realized in the authorized elimination of the unfit in the chamber of Euthanasia, when man and woman may not "under any circumstances come together in lawful wedlock without a certificate of physical perfection from the Holy Officer of Health"; but meanwhile there is not a little for each of us to do in preparation for that ideal social requirement. Cruel and remorseless as was the primitive Scot, from the point of view of science, he was more advanced than we moderns, when, as Hector Boethius tells us, "He that was trublit with the fallin evil or fallin daft or wod or havand sic infirmite as succeedis be heritage fra the fader to the son, was geldit, that his infected blude suld spread na firther," and "the woman that was fallin lipper or had an infesion of blude, was banist fra the company of men." The legislation attempted in Michigan within recent years is a hopeful sign of the times, however hopeless the outlook for the successful enactment of wise and humane measures of repression may in fact appear.

These remarks are suggested by a recent paper by Dr. C. A. Davies, read before the British Medical Association, showing the dire result of haphazard inbreeding in the Isle of Man. There has been little crossing of races among the Manxmen since the twelfth century, and the custom is to discourage marriages between persons living in different parishes. The consequence is that the death-rate from consumption is 25.70 per 1000, double that of England and Wales. In Lonan, where all of the inhabitants have but three or four surnames, the rate rises to 41.79 per 10,000; while in Peel, where many more strangers come, it is only 15.19. These are statistics of stupendous im-

port, and we have no doubt the ruthless propagation of insanity in the island may be shown in like manner. To physicians of our specialty the fact is patent enough that the parent can give no other life to the progeny than that which he or she possessed at the time of imparting that life; but it is unsafe to assume that that law is known even to the intelligent layman, or to the man in the street who is so-called by courtesy, for how otherwise can we account for that reckless mating of men and women everywhere around us, which we do so little to prevent?—a neglect on our part, be it insisted, hardly less criminal than the crime itself.

THE Rev. Dr. S. G. Smith, of St. Paul, at the Topeka Conference of Charities in May last, presented a report as chairman of the committee on Public Policy in Caring for the Insane, from which we make the following extracts. He said:

There are three questions under which can be grouped what there is to be said: First, who shall pay the bills for the care of the insane? Second, by what methods shall their care be conducted? Third, by what agencies can these methods be made most effective? The importance of the first question is disclosed by the fact that the care of the insane is the largest philanthropic burden of the State. In those States where the care is at all efficient, it is far larger than any other item of public expense. In this country there are three possible sources of income: the bills may be paid by the family, by the county or parish, or by the State. There are objections to each method. The care of the insane by the family results in so much pauperism and distress that it must be at once dismissed. It is only among barbaric peoples that the care of the insane is left solely to the family. The care of the insane by the counties has resulted, even in the best States, such as Iowa, in gross neglect, in the crowding of almshouses; and even the jails are made a refuge for these poor unfortunates. Where the State assumes the entire expense of caring for the insane the result is that the numbers are swelled by a large number of so-called "senile dements," who properly belong to the poor-houses where they are paupers, or in the home where their friends have means. There are certainly objections, and very serious ones, to either of the three methods suggested; and without entering into any further discussion, I desire to express the opinion that the very best results can be obtained by the combination of the three possible sources of income.

By what methods shall their care be conducted? It is obvious that if we could find the methods that would at the same time do the most for the unfortunate and make the economic burden for the community the

lightest, that is what we want. Some facts that are practically universally recognized would seem to furnish a great deal of guidance. In the first place, it is well known that there is no disease where speedy treatment is more surely indicated than incipient insanity. Indeed, many cases of mental disturbance might readily be relieved if treated in time, and the patient restored to his normal relations in society, which by neglect have become a burden for years upon society, to say nothing of the shocking ruin of a human life. The Detention Hospital, therefore, is at once indicated as a first necessity, and such a one should exist in every considerable center of population. Access should be easy and without the necessity of legal process. Their nearness to relatives and friends, the ease with which they can be regularly inspected, would prevent any possible abuses and the improper incarceration of the insane. It may be well here to state that there is far more of the latter in morbid literature than in fact. Another fact that is a clear indication of method is that the length of time of the continuance of insanity tends steadily to diminish hope. If a patient is to recover from insanity, he will usually recover during the first year. Since the period of real hospital treatment for the insane is comparatively brief, the fact indicates that lavish expense should be incurred to furnish every necessary agency to restore the acute insane. This is the wisest economy. It is far better for the State to spend money in a generous way for one year than to have the insane man as a permanent charge during his life. This proposition involves a generous and varied diet, baths of various kinds, massage, electricity, and every other agency that can be shown to be useful.

In the next place, too much insistence cannot be laid upon the need for individual treatment. There should not be more than two or three acute patients to one nurse. The temperament, the organization, and the changing conditions of each patient from day to day should be carefully noted. You can as well measure out treatment on general principles for pneumonia as you can for insanity.

It would seem certain that the therapeutic value of work has not received sufficient attention. Attractive manual labor in various forms brings the body to a normal condition, favorably affects the circulation of the blood, assists digestion, is a better sleep-maker than hypnotics, and, above all, furnishes normal occupation for the diseased thoughts and emotions. Any care of the insane that does not propose work for the patients that have sufficient physical strength is clearly lacking.

There is another matter which has never received, so far as I know, sufficient attention. The periodicity of insanity has been a favored doctrine with specialists. In practice, discharged patients are returned to hospitals and asylums again and again. It seems to me sufficient attention has not been paid to the importance of environment after discharge. The two potent factors in insanity are the neurotic organization of the individual and the stress furnished by the circumstances of life under which the organization breaks. To send a patient back again to the locality where his insanity was induced is precisely the same process as

to send a patient who is convalescent from a fever to live in a swamp. A Convalescent's Home and the gradual restoration of the patient to normal conditions are clearly indicated.

What can be said about the prevention of insanity? I leave to others wiser than myself the discussion of the subject of marriage. The control or guidance of marriage by the State is a problem I do not propose to attempt to solve. The question of prevention is a question of the care and training of childhood. Where the neurotic diathesis is evident the physician should, in the first place, indicate to the parents the dangers of every kind that lurk in the constitution of such boy or girl, and as soon as the child reaches years of discretion he should himself be informed of the dangers that threaten him. Indulgences that are permitted to ordinary people are denied him. His life must be surrounded by moral hygiene. He himself must be carefully trained to habits of self-control. Occupations, burdens and duties which are normal to the average man must be avoided by him.

In an important paper on this subject prepared by Dr. Stephen Smith, of New York, in the year 1893, he urges the relation of the family physician to the question of the commitment of the insane, but does not sufficiently emphasize the incapacity of the average family physician to perform this great duty to society. As a matter of fact, the ordinary physician knows little or nothing of the subject of insanity, nor is he to blame for this ignorance. There is neither sufficient didactic nor clinical instruction in mental and nervous diseases. The prevention of insanity will not be secured until there is wider knowledge of the subject both on the part of the profession and the laity. With these suggestions, I must leave the subject of methods, pausing only to add that under the present conditions it is thought to be a successful institution that can discharge thirty per cent of its patients as restored to health. In the opinion of the best alienists, a still higher percentage of recoveries might be secured by early treatment and proper methods. It is not too much to say that the burden of one-half the chronic insane in this country is due to inefficient treatment in our hospitals. There is not much time left me for the discussion of the third question.

By what agencies can these methods be made most effective? The classical method of building an institution in block, making of it a huge prison-palace stands over against the various expedients known as the pavilion system, the cottage system, the colony system, the boarding-out system and the Wisconsin system. Mr. Sanborn, a member of this committee, has pointed out the difficulty of transplanting institutions. Every public institution must be modified to meet changing local conditions and requirements in the various States. When I visited the colony in Gheel, Belgium, where nearly two thousand insane are taken care of by the peasants in a cluster of hamlets, it seemed to me that, however admirable it might be for the people who had developed the system, it could not possibly be transplanted to this country in any similar form. I would like to make an observation also at this point, growing out of

my visits to the insane in different countries, namely, that the question of race has not been sufficiently emphasized in the study of insanity. I am persuaded that in the mixed populations of this country a great deal of light of a scientific character is yet to be thrown upon this matter, and from it a great deal of practical wisdom is to be deduced. I think it will one day be evident that insanity manifests itself in a different manner in different races. It is already very evident that crime of various kinds has certain definite race affinities. It will yet be found that various forms of insanity are differentiated in a like manner. It is clear from what has been said of the methods of treatment above that any of the systems is better than the old-fashioned huge asylum. Dr. Weir Mitchell, of Philadelphia, a short time since made an attack upon the superintendents of hospitals for the insane, practically charging them with ignorance, indolence and inefficiency. I wish to say a word in defense of the superintendents. The superintendent is made mayor of a town of from one to two thousand inhabitants, for his institution amounts to this. He is also chief of police for the same village; then he has general charge of the butcher shop, the bakery, the dry-goods store, the grocery store, the dairy, and he is usually expected besides to be an expert farm overseer. A man of genius would break down under any attempt to master the details under the control of the average superintendent, and the average superintendent is not a man of genius. After loading the poor man with the immense burden of the work above outlined, he is expected over and above all this to make a study of the subject of insanity. This is simply brutal and unfeeling. It is beyond all possibility of human strength. The great hospital breaks down not alone because it is expensive, but because it is scientifically impossible.

The State of Minnesota has recently entered upon a new method of caring for its chronic insane which is somewhat different from that pursued elsewhere. Through a disagreement between the legislature and a commission to locate a fourth hospital for the insane, the entire plan of a fourth hospital was rejected and the two rival towns each received a small asylum for chronic insane. It is believed that Minnesota will never build another large hospital for the insane. The economic features are different from those of Wisconsin in that these asylums are wholly maintained and controlled by the State, but the practical work is substantially the same. What may be accomplished by making the lives of the chronic insane more beautiful and tolerable may be seen in such institutions; and Dr. Rowe in a recent article has shown the same thing for Islip, Long Island.

The interests of the State and the future of society are to be largely influenced by the dispassionate and thorough discussion of the question before this conference at this time. It seems evident that the treatment must be earlier, the early treatment must be more ample, the period of hope must be recognized, both in the interests of the acute insane and the chronic insane. The great hospital is a scientific anachronism.

Abstracts and Extracts

The following is an abstract of a paper by Dr. Inglis, of Detroit, "The Dual Action of the Brain, and its Relations to Dexterity and Double Consciousness":

The brain is, anatomically, a double organ, yet mental processes are single. A priori we should expect, in a double brain, a double mind. Text-books on physiology and nervous diseases have little to say of the relation of the two halves of the brain in mental processes, yet the question is of great importance not only in physiology, but in the pathology of mental disease. A sufficient number of cases have been recorded to make it certain that a man can retain his personal characteristics and mental activity in whom one-half of the cerebrum has been destroyed. Again, a number of authentic cases are on record in which there was no corpus callosum, and in these individuals there was no defect in mental activity. These facts demonstrate that one-half of the brain can carry on the mental processes of a normal man.

The question which the author of the paper raises is this: Is it not possible that we always do in health what these cases demonstrate that a person may do in disease? The author contends that in health we do all of our thinking with one-half of the brain, the other half playing an entirely subordinate rôle. Physiological arguments in favor of this view are found in the following facts: While coarse movements can be performed nearly as well by one-half of the body as by the other, whenever it becomes necessary to carry out movements involving speed, dexterity and accurate adjustment, nature organizes one-half of the brain much more fully than the other. Right-handedness is not an accident, but part of a well-defined purpose to secure the greatest facility in the carrying out of skilled movements. We are not only right-handed, but right-legged, right-eyed and right-eared. It is true that a right-handed man can perform with his left hand, in a clumsy manner and slowly, almost any act usually done with his right, but when we come to the more highly specialized movements concerned in speech, nature practically abandons one-half of the brain and concentrates the entire speech function upon the other, and the speech function is localized upon the half of the brain connected with the skilled hand. Not only are the special processes centralized in one-half of the cerebrum, but the various centers for heard speech, written speech, emissive speech, are all located in those parts of the different lobes concerned, nearest to a common center, around the Island of Reil. Nature has, evidently, planned it so that the infinitely varied and excessively rapid impulses concerned in

speech shall be made easy by shortening, as far as possible, the course which these impulses must take through communicating fibers; in other words, a right-handed man is right-sided, but in nothing is he so right-sided as in speech. When we consider mental processes it is clear that most of our thinking is carried on in terms of speech, and all of our abstract thinking must be carried on in words.

If, for the purpose of facilitating the most skilled and rapid movements and the most rapid combination of sensory memories, nature has used one-half of the brain alone, then it is a logical step to believe that, to carry out the still more rapid processes involved in thought and volition, the same principle should prevail, and that the seat of consciousness and volition is to be found in the closest relation possible with the speech centers which play so vital a part in all mental processes. If it be objected that it is difficult to believe that one-half of the brain should lie inert while the other carries on alone the intellectual processes, the sufficient answer is that the convolutions which correspond to the various speech centers do now lie inert and seem to perform no particular function. This is just as surprising as it is to conceive of the cortex of the anterior lobes lying similarly unused. There are also pathological facts which strongly support the idea here propounded. There can be no question that in Jacksonian epilepsy we are dealing with a discharging lesion involving larger or smaller areas of the cortex upon one-half of the brain only, and it is characteristic that consciousness is preserved unless the convulsion spreads and becomes bilateral, and the moment it does so the patient becomes unconscious. The meaning of this is clearly that while the convulsion is going on in one-half of the cerebrum the patient retains consciousness with the other.

The phenomena of double consciousness strongly support the idea of the dual action of the brain, and can best be explained on the hypothesis which is the subject of this paper. The normal man carries on his conscious life and mental activity with one-half of his brain. Ordinarily the opposite half has no part in the conscious life. In certain neurotic conditions the hitherto unused half rises to supremacy, and the usual governing half takes the subordinate place. That this is the correct solution of the phenomena of double consciousness finds strong support in the phenomena of hysteria and hypnotism. The patient can be rendered, by either of these neurotic conditions, the subject of a hemianæsthesia; and it is notable that the hemianæsthesia can be transferred from side to side; and, similarly, subjects of double consciousness, under hypnotic influence, may be made to change personalities. From a study of the phenomena of hypnotism it becomes clear that there is that in us which is termed a "subconscious personality" which is capable of carrying out very many of the mental processes of the conscious personality unconsciously. Physiologically interpreted, this means that the secondary half of the brain, while playing a subordinate part, is, nevertheless, capable of carrying out the combinations of sensations, sensory memories and certain motions in a

logical manner. The paper details a case of the writer's in which a patient, a subject of melancholia, was incessantly tormented by the duplication of all impressions; it seemed to her that every act she performed was done by her at the time it was performed and also precisely two years before. No act was so trivial but it seemed to her that she had done precisely the same thing, under precisely the same circumstances, two years before. The preeminent characteristic of melancholia is an increased self-consciousness. The explanation of the case here alluded to is best made by believing that the two halves of the brain participated in consciousness, one slightly behind the other; she thus got a double impression of every experience. Inasmuch as the phenomena of the duplication of sensations, double consciousness, due either to hysteria or hypnotic suggestion or graver mental disease, are always evidences of mental impairment, it would seem that to maintain the most perfect mental action one-half of the brain should persistently exercise the controlling power. Anything which tended to make the ordinary quiescent half assume control tends to impairment of mental processes and the damage of the individual. If this be true, the attitude of those who advocate a cultivation of ambi-dexterity is thoroughly illogical. Instead of trying to make a right-handed person less right-handed we ought rather to try to make him more right-handed. Conversely, the attempt to make a left-handed boy right-handed is a physiological crime. Every effort ought to be made to make the left-handed boy more left-handed. It is a notable fact that Lombroso states that a much larger proportion of degenerates are ambi-dextrous than of normal individuals.

Very suggestive of the value of a thorough unilateral training of the brain is the fact that, through the centuries our educational institutions have persistently concentrated their efforts on training not only the young, but advanced, students in the study of language. All the years that a boy is studying language he is systematically training one-half of his brain, to the neglect of the other, and it is by no means unlikely that such thorough training contributes to render the dominant half so securely dominant that there is little danger of the other half interfering.

Pathologically, the paper opens up certain applications of this theory in the explanation of abnormal mental states, and the paranoiac may be conceived of as an individual in whom the secondary half of the brain carries on an activity sufficiently persistent and independent of the dominant half to explain the double life of a paranoiac, and the gradual growth and systemization of delusions based on hallucinations which find their origin in the uncontrolled action of the secondary half. Again, it is not difficult to understand the mental confusion which would necessarily arise if the two halves of the brain, acting independently, were engaged in active mental processes.

Book Reviews

Studies in the Psychology of Sex: The Evolution of Modesty; The Phenomena of Sexual Periodicity; Autoerotism. By HAVELOCK ELLIS. Philadelphia, New York, Chicago. The F. A. Davis Co., Publishers. 1900.

It is unfortunate that, in the English language, the term "modesty" is used in two entirely distinct significations. The author of the work before us, as might be inferred from the connection, employs it to designate the feeling of bodily shame, and has collected a large amount of information as to the various forms which it takes in different peoples. He concludes, as every impartial investigator must, that it is, at least so far as the manner of its manifestation goes, an entirely conventional matter. Perhaps as curious a phenomenon as any that he mentions is the fact that the Japanese, who are, or were, until brought into contact with European ideas on the subject, entirely indifferent to personal exposure, consider the pictorial representation of the naked human body indecent. One need not, however, go far afield to find topsy-turvy ideas on this subject. Fanny Kemble, in her reminiscences, tells of an actress accustomed to appear nightly on the stage in tights, who suffered from an inflammation of the knee-joint. She could not be prevailed upon to allow a surgeon to see her knee, and ultimately died, a martyr to modesty.

As to the origin of the feeling and the cause of its wide prevalence, he inclines to think that it is in part due, in women, at least, to the disposition to repel inopportune sexual advances, and in part to the dread of inspiring disgust. Shame in regard to the evacuations of the body is wide-spread, and the proximity of the genital organs to the emunctories probably plays a part in the evolution of the sentiment. An interesting fact, in this connection, is the feeling among certain savage races that it is indecent to be seen eating. This the author explains by the precarious supply of food in savage life, and the envy and disgust with which a hungry man would, under such circumstances, see another feeding He thinks that an analogous feeling may have prompted the concealment of whatever relates to sexual gratification.

The fact that among some savages only married women are clothed, and the men consider it a disgrace for themselves to wear garments, seems to indicate that in such cases the imposition of clothing is connected with the conception of the husband's property in the wife.

He concludes that the influence of civilization has been to extend the domain, but not to increase the intensity of the feeling of modesty, and

that it is now a grace, rather than a fundamental social law of life. "But an essential grace of life it still remains, and whatever delicate variations it may assume we can hardly conceive of its disappearance."

The second part of the work treats of menstruation, which the author believes to be analogous to the period of heat in female animals, although independent of ovulation; of the question of an annual sexual periodicity, evident in savages amongst whom there are seasonal variations in the supply of food, and perhaps showing traces of survival amongst civilized peoples in the greater number of births at certain seasons of the year, as well as in popular festivals, and of the question of a monthly sexual periodicity in men, of which there seem to be some intimations in the variations of involuntary seminal emissions in the continent, although the data are not sufficient to warrant a decision.

The third part is largely taken up with the study of masturbation. He believes the practice to be much more common than is generally supposed, and that, although boys are more addicted to it than girls, it is probable that it is more prevalent among adult women than men, owing to the greater opportunities of the latter for natural sexual gratification. He believes its evil effects to have been greatly exaggerated, especially in regard to its connection with insanity, of which he is unable to find satisfactory proof that it is of any importance as a cause. In fact, he doubts whether, if not practiced with excessive frequency, it is certain that it is at all physically injurious.

He also considers the relationship of hysteria to sexual life, and is disposed to accept the view of Breuer and Freud, that it is due to shock in the sphere of the sexual emotions. Whatever may be the truth in regard to this hypothesis, the propriety of placing it among autoerotic phenomena is not clear to us.

In an appendix, the author treats of the influence of menstruation upon the social position of women. He inclines to believe that the mystical ideas of uncleanness in regard to this function, widely prevalent among primitive peoples, have had much to do with the treatment of women as inferior beings. Another appendix treats of the autoerotic factor in religion, taking the familiar, and doubtless, to some degree, correct view, that the erotic and religious feelings are intimately connected, and that the raptures of some of those who have passed as saints were essentially of the nature of amorous excitement.

Taken as a whole, the book, although well written, and full of facts, does not seem to throw any specially new light upon the subjects of which it treats.

Primitive Love and Love-stories. By HENRY T. FINCK, author of "Romantic Love and Personal Beauty," "Lotos-time in Japan," etc. New York, Charles Scribner's Sons, 1899.

This good-sized volume is an answer to criticisms of the position taken by the author in his previous work, "Romantic Love and Personal Beauty," that falling in love, as understood and practiced at the present

day, is a modern fashion of the western world. This view of the matter he acknowledges to have been contrary to his own preconceived opinions, and it not unnaturally met with considerable opposition. The author has collected a large amount of information in regard to the manner of courtship and the relations of the sexes among savages and barbarous races, and under the civilization of Greece and Rome, as well as those of Asiatic countries in modern times, together with a number of characteristic love-stories of various times and races. He seems to have been painstaking and accurate in his researches, and, in the main, fair in his use of his materials, and has collected a large amount of curious information.

Whether he has established his position is mainly a matter of definition. He is unquestionably right in his fundamental position, that the ideas and ideals of men and women react upon their feelings. Love in men who reverence woman as a superior being will not be the same as in those who value her merely as a drudge, an instrument of sensual gratification, or a necessary means of perpetuating the race. He shows, abundantly, that savages are coarse and brutal in their sexual relations, as otherwise, and that in most civilizations women are relegated to a position of inferiority incompatible with the "adoration" which he considers one of the components of romantic love, and are disposed of in marriage without much regard to their preferences. There will, we think, be many who will not be satisfied that there is nothing romantic in the fidelity of the heroine of Solomon's song to her shepherd lover, in spite of the blandishments of a mighty monarch; in the love of Hero and Leander, and of Sakuntala, notwithstanding that their feelings doubtless differed from those which two Sunday-school teachers in New York would experience. Each one is at liberty to set his own standards, and to say, for instance, that nothing is romantic that falls short of Emerson's sentiment:

> "Have I a lover
> Who is noble and free?
> I would he were nobler
> Than to love me."

The author mentions "altruistic self-sacrifice" among the characteristics of romantic love, but we do not understand that he carries it as far as that; in fact, he also includes "monopolism" and "jealousy," which seem to be somewhat inconsistent with the completeness of the first-named virtue.

He enumerates fourteen constituents of the complex sentiment of romantic love, a full discussion of all of which would require too much time. On the other hand, he omits what seems to us an essential ingredient, and, apparently, in what he says of "mental purity," denies its existence. If the sexual appetite is not at all concerned in the passion, why is it that love is normally confined to the age of reproductive activity; that it naturally leads to matrimony; that romantic love between

persons of the same sex common enough in young ladies' boarding-schools is viewed askance by the judicious?

> " Were kisses all the joys in bed,
> One woman would another wed."

He seems to fall into the error, although we may misunderstand him of supposing that the sexual appetite is of itself impure,

> " Condemning as unclean what God calls clean."

Whatever may be his real meaning on this point, he is convinced of the utility of romantic love as a promoter of happy and fitting marriages. Here, it seems to us, a distinction is to be made. Of the utility of affection before marriage in this regard there can be no reasonable doubt. Whether the more romantic the better is a question which would probably be answered differently, according to one's view of life. Those who think the realities of life intolerable, and that the only way to endure it is to escape into a fool's paradise, would probably say that the tendency of lovers to endow the beloved object with all sorts of imaginary virtues, and be blind to all faults, is worth having, even if the illusion can only be temporary. The author seems to think that the extravagance of lovers is useful as an inspiration to effort to live up to each other's ideals. There may be something in this, but to fall in love with an imaginary being can hardly be the best assurance of conjugal happiness, and a self-respecting man or woman would hardly wish to be merely a lay-figure, to be decked out with fictitious charms. Inasmuch as the author has shown that people only fall in love because it is fashionable, it behooves us to see that the fashions in this regard are as wholesome as possible.

Half-Yearly Summary

ARKANSAS.—*State Lunatic Asylum, Little Rock.*—The infirmary was opened on July 1, and it has averaged 20 patients daily. The removal of the sick from the wards to the infirmary, away from the noise and confusion of the wards, has had a wonderful curative effect and considerably reduces the mortality. The next Legislature will have to provide additional room for at least 250 patients, as the institution at present is full to overflowing.

CONNECTICUT.—*Retreat for the Insane, Hartford.*—On Saturday, September 22, 1900, Dr. Gurdon W. Russell, President of the Retreat, presented to the institution, for the use of its patients, his summer home, Maplewood Lodge, with nine acres of land, located on Cedar Mountain. This property stands on the highest point of land in the neighborhood, and on three sides the land slopes gently away to the woods below. Mount Tom may be seen in the distance. Hartford lies tucked away to the northeast, and the view of the whole surrounding country is beautiful.

Dr. Russell's purpose is to provide a place where the patients of the Retreat might have an opportunity for a vacation and a change, and for this Maplewood Lodge is ideal. It is not too far from the city for convenience, and is isolated.

In the presence of the directors of the Retreat, Dr. Russell presented the deed and indicated his purpose. Appropriate resolutions of thanks were adopted. Guardians for the property have been obtained and the lodge will be put in condition immediately for occupation next summer.

—*Dr. Given's Sanitarium, Stamford.*—Two new cottages have been erected and an extension to the kitchen made at Dr. Given's Sanitarium at Stamford, Conn., during the past year, so that the place now accommodates one hundred and fifty patients.

ILLINOIS.—The last report of the State Board of Charities shows that there are 7270 insane in the five State institutions, and the net *per capita* cost of maintenance for the three months ending June 30 was $33.17. These figures do not include the Asylum for Criminal Insane at Chester.

The new pavilion at the Southern Illinois Hospital for the Insane at Anna, Illinois, is nearing completion. This building will permit of the segregation of the epileptics and demented patients, and seems to be in every way well adapted for its purpose. It contains two stories and a

basement, and the last Legislature appropriated $40,000 for its construction.

Three pavilions are being added to the Institution for Feeble Minded Children at Lincoln. They are intended to accommodate six hundred inmates, at a cost of $200,000.

At the Northern Hospital for the Insane, at Elgin, the new woman's infirmary is nearing completion and will accommodate about one hundred patients.

INDIANA.—For the Northern Indiana Hospital for the Insane, at Logansport, Dr. Rogers reports the opening of two additional buildings, each containing two wards, the lower for infirmary uses solely, all having a total capacity for 200 patients, with outside accessories for additional heating, lighting and water supply, at a total cost of $80,000. The equipment is thought to be in accordance with the best and most recently accepted principles of hospital construction in every particular.

IOWA.—On September 18, the superintendents of the twelve State institutions in Iowa met in the rooms of the Board of Control at Des Moines for their ninth regular quarterly conference. All of the superintendents were present, besides the three members of the Board of Control. Dr. H. A. Tomlinson, Superintendent of the State Hospital at St. Peter, Minnesota, was present and, by request, read a paper on "The Development of Medical Work in Hospitals for the Insane and its True Significance." It was a historical review of the care which the insane have received in various countries in the centuries gone by and during the early part of the century which now ends. In general terms the doctor believes that hospitals for the insane can be conducted in very much the same manner that general hospitals are now being conducted, that they should have training schools for nurses in them composed of women exclusively, that they should make surgical operations whenever indicated, have a receiving ward for each sex and keep all new patients admitted in bed for the first forty-eight hours in order to impress them with the fact that they are in a hospital for treatment, that they are to be regarded as sick persons and to be cared for by nurses. During these first two days thorough mental and physical examinations are to be made and a full description of each case, including urine analysis, body temperature, pulse, respiration, the condition of the digestive organs and the excretory functions carefully determined.

Dr. Tomlinson is fully persuaded by extensive experience that wards containing men patients can best be cared for, with few exceptions, by women nurses almost exclusively. His paper was an excellent one, for which he received a unanimous vote of thanks, and it will be published in the next number of the *Bulletin of Iowa State Institutions*. Superintendent L. D. Drake, of the Reform School for Boys at Booneville, Missouri, was present and read a most interesting paper, entitled "Industries in Reform Schools." He believes in teaching every boy who is

old enough a trade and making him sufficiently skillful so that he can earn a good living for himself after being discharged. He brought with him an exhibit of clothing, cabinet-work and various kinds of tools which were made by hand by the boys in his institution. Hon. John Cownie, of the Board of Control, read a paper entitled "Suggestions Concerning the Purchase of Supplies," and the Secretary of the Board of Control, F. S. Treat, read a paper entitled "How to Simplify and Better Systematize Institution Accounts." Dr. Max E. Witte, Superintendent of the Hospital for the Insane at Clarinda, Iowa, read a paper giving his views as to how the facts and subsequent history of those who have passed from out State institutions may be better collected and preserved. He dwelt first on inmates of institutions for the insane and cited the difficulty of obtaining valuable, reliable history of the career of patients after they sever their connection with the hospitals. He thinks it hardly worth while to enact laws compelling patients or their relatives to report their condition periodically after they are discharged; nevertheless, he is of the opinion that blanks containing suitable questions and spaces for answers should be sent to the families of patients who have been discharged and to their physicians when they are known, and thus learn whether they continue well and do well if discharged as cured, whether they complete a recovery at home if discharged as improved, whether patients who are discharged from the hospitals for the insane as unimproved get better or do well at home; also, so far as practicable, learn whether patients have subsequent attacks of insanity or whether they are placed afterward in other institutions for treatment, or whether any of them have died soon after reaching their homes. This paper was discussed, and the conclusion reached that the full value of the work done by State institutions can only be known by the managers of State institutions and by the public generally when the after-life of the discharged inmates is known.

Wardens of the two penitentiaries who were present assured the conference that it is next to impossible to learn anything about the after-history of discharged convicts unless they are returned to the penitentiaries or unless their whereabouts are reported by peace officers.

For the hospital at Independence, a small appropriation was made by the last Legislature. Of this, $6500 have already been expended for two Stirling water-tube boilers, each of 225 horse-power capacity, and $1500 for new indirect radiators, to replace radiators which have been used in the hospital for twenty-eight years. Money was also appropriated for improving the ventilation of the hospital, for introducing shower baths, for a new mangle and for making minor repairs to the amount of $5500.

During the months of August and September there has been an epidemic of typhoid fever in the hospital at Independence, which was probably caused by sediment which had collected in the bottom of two tanks located in the top of the administration building, into which water from the city of Independence is delivered. These tanks extend upward to the rafters of the roof and have been sealed at the top for years. When-

ever the Holly system of waterworks in Independence is used for extinguishing a conflagration, water is pumped directly from the channel of the river into the mains. At other times the supply is drawn from drive well-points, which are located fifteen feet below the surface of the earth not far from the waterworks building. Holes were cut through the roof of the administration building in order to inspect the inside of these tanks. A sediment of black soil, two inches in depth, was found in one of the tanks and a smaller quantity in the other tank, which had been emptied for repairs last May. It is supposed that the sediment in these tanks was deposited at different times when water had been delivered at the hospital, coming directly out of the Wapsipinicon River, and that it contained typhoid-fever germs, and that during the summer months these germs had greatly multiplied, so that their presence in the drinking water and the exceedingly hot weather during the months of July and August caused this epidemic. These tanks were thoroughly cleansed and it is expected that epidemics hereafter will not be caused in this manner.

—*Iowa Hospital for the Insane, Mt. Pleasant.*—This hospital has recently opened a large and extensive physiological, pathological, chemical and pharmaceutical laboratory. This laboratory is in charge of Dr. Charles Hoffman, Ph. D., Heidelberg, and S. H. Sheppard, Ph. G., of Chicago. The laboratory is fully equipped with all necessary apparatus and instruments of precision, and work in these several lines for the thirteen State institutions under the management of the Board of Control will be done. It is expected that at this laboratory will be manufactured the greater portion of the pharmaceutical preparations used in the institutions of the State.

The following new buildings, which are now under process of erection, will be completed before winter: a large and well-equipped fire-station, with rooms above for a fire department; a new general kitchen, equipped in the most modern manner; new system of waterworks, including reservoirs, steam pumps, etc.; an industrial building, in which will be located carpenters, painters, upholsterers, wood-workers, printers, tailors, etc.

The hospital has been completely equipped with four Kirker-Bender fire-escapes, so located that means of escape are provided from all sections of the building. It is a daily occurrence for the patients, when going out of doors for exercise, to go through the fire-escapes, and it is becoming quite a popular source of amusement for them. This system of fire-escape is heartily endorsed by the hospital officers.

A complete system of electric lighting is now being installed, and by late fall the institution will have, for the first time in its history, proper lighting. New engines, dynamos, and a thorough system of wiring is now under process of installation.

All parts of the institution are connected with a central office by means of a first-class telephone. The old Bell system has been discarded and the new and improved Stromberg-Carlson system installed in its place.

The detached cottage, which was formerly used for a class of demented patients, has been remodeled, refurnished and converted into a model hospital for the sick. It accommodates fifty patients, and is one of the most completely equipped and best adapted buildings of its kind in the country. It is hoped that a similar building will be provided by the next Legislature for the women's wards.

The old, unsightly and dangerous reservoir, located directly in front of the wards, has been abandoned, is being filled, and the ground will be converted into a beautiful lawn, which will be used by the patients of the front sections. This reservoir, in addition to being absolutely useless for water storage, has been the cause of numerous accidents in past years, and was always a menace to the health of the institution.

The old and unsightly pens, twelve feet high, in which the patients have been herded for years, have been torn down, and all the patients are now given the privileges of the beautiful park. A marked improvement in the deportment of the patients and in their general condition has been noted by this change, which was made last year.

The Training School for Nurses opens about the middle of October, and a large class will be in attendance. The Training School is gradually improving the staff of nurses, and the nurses are being rewarded for their attention to duty and for their interest in the Training School by an increase in wages.

—*Iowa Hospital for the Insane, Clarinda.*—At the last session of the General Assembly appropriations were made for improvements and extension to the general kitchen; for converting an old well into a cistern; and for building a cow barn, shelter for the cows being practically lacking. During the summer, this work has been going on, and most of it is nearing completion.

The hospital has been free during the past summer from any serious or epidemic disease; the general health, on the whole, being very good.

The wells from which the hospital derived its water supply during the extreme dry weather of July gave out completely, and for a time a serious water famine threatened, which was averted by the prompt sinking of other wells to a greater depth, which fortunately proved sufficient to supply the needs of the hospital.

LOUISIANA.—The situation of the insane in Louisiana is described in the following despatch to the *New York Sun* of June 30, 1900:

"The lunatic problem is very troublesome in Louisiana just now in consequence of the rapid increase of the insane, especially among the negroes, due probably to the general use of cocaine and other drugs. The increase in lunacy in the State has been so rapid of late that although the insane asylum at Jackson has been added to every few years, it is unable to accommodate a large number of the insane, who are accumulating in all the parishes, but especially in New Orleans, waiting for a vacancy to occur in the asylum by death or discharge. These lunatics

are confined in the local jails, places usually unsuited to them, and in which they suffer the greatest hardships, being usually without the necessary attendance and treatment. An investigation by the authorities in New Orleans a few days ago disclosed such a frightful condition of affairs among the lunatics that the city has decided to erect a temporary asylum where they can be confined until the State has room in which to quarter them. Meantime they are confined in a private institution, the city paying their board.

"This overcrowding of the State asylum has led to another evil. In view of the fact that there was no accommodation for the lunatics, except the noisome police jail, the milder lunatics—those who were believed to be safe and quiet—have been allowed to run at large. On June 24 a severe lesson was taught in this matter when one, Richardson by name, ran amuck through the principal streets of New Orleans, killing a former friend, Schloessel, and a boy, Whitaker. The lunatic himself would have been lynched by a mob, who knew nothing of his insanity, but for the sheriff.

"Several other affairs of this kind have impressed upon the people of Louisiana the fact that no lunatics are harmless, and a demand has been made on the Legislature for a large increase in the appropriation for the asylum, so as to enable it to provide for all. There are 1157 insane persons confined in the asylum, and the total would be increased to 1500 if there was room enough in the institution. The increase in the inmates has been at the rate of 5 per cent a year, showing a remarkable development of insanity in Louisiana.

"Of the inmates, 422, or nearly one-half, are negroes, and it is remarked as a curious fact that whereas among the whites the males exceed the females, at the rate of four to three, among the negroes, the women lunatics are in a majority.

"In the last few years, under the administration of the present superintendent, Dr. G. A. B. Hays, the methods pursued in the treatment of the insane have been radically changed with a most salutary result.

MARYLAND.—The second group of buildings of the Springfield State Hospital, at Sykesville, formerly known as the Second Hospital for the Insane of the State of Maryland, has been completed, and was opened for the reception of patients on July 19.

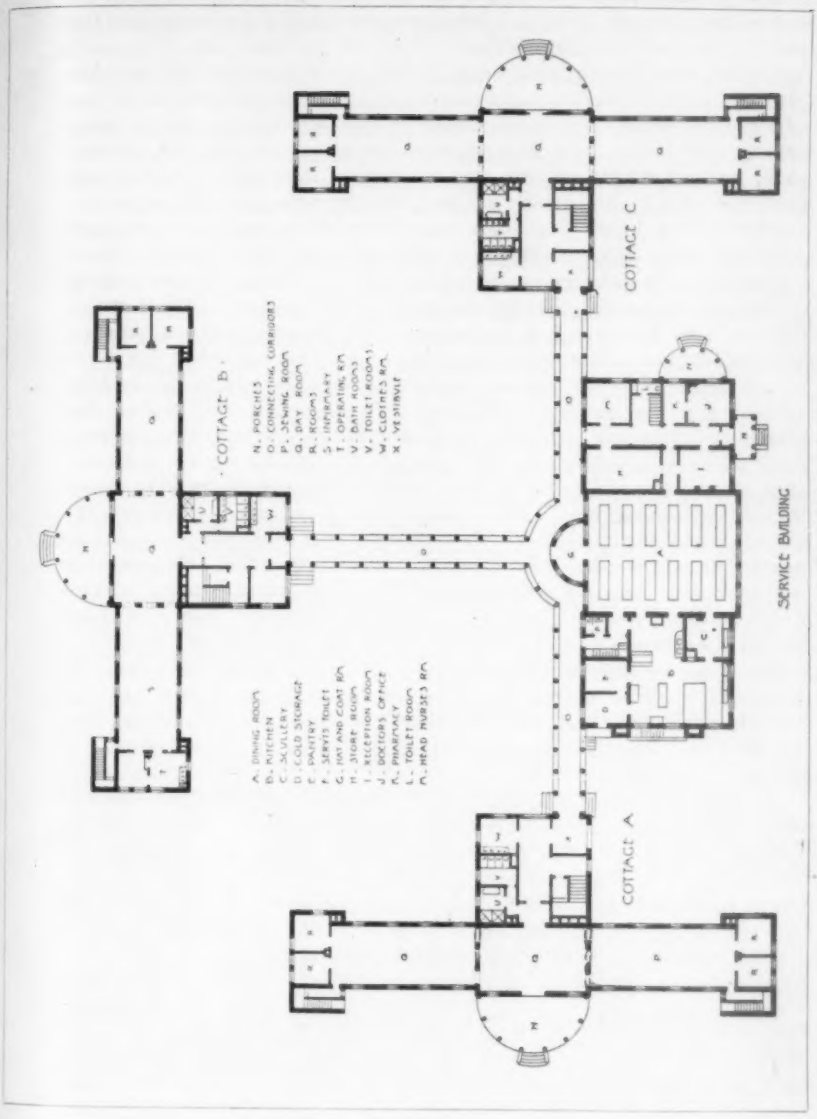
The group is for women patients; it is about three-quarters of a mile from the first, or men's group, and is situated on the crest of a hill overlooking a valley, through which there is a running stream of water, which it is proposed to dam, making a lake, covering about ten acres. The group consists of a service building and three cottages, constructed on the block plan. The service building is 119 x 52 feet in dimension, and faces the north. In the basement is the heating plant for the whole group, being a combination of the direct-indirect hot-water system, and a steam boiler for kitchen purposes and to supply hot water for service building and cottages, also coal and vegetable cellars.

On the first floor in the east wing, directly over the boiler-room, is located the kitchen, which is fire-proof; adjoining the kitchen are the cold storage, pantry and scullery.

In the center is the patients' dining-room. This room is 40 x 50 feet, and runs all the way through the building, being connected with the cottages by corridors, through which the patients are brought to their meals. In the west wing are located the doctor's office, reception-room, pharmacy, storeroom, supervisor's room and toilet. On the second floor are a suite of rooms for the assistant physician, the doctors' reception and dining-rooms, and bedrooms for officers and charge nurses with bath. On the third floor are bedrooms for attendants and baths. There is a front and side porch of colonial style of architecture with marble trimmings. The rear porch is a continuation of corridors, which connect the service building with the cottages. The floors of all the porches and corridors are of granolithic cement.

The cottages are 166 x 45 feet in dimension, two stories in height; they are connected with the service building by open corridors, under which is a spacious tunnel, carrying the hot-water pipes, sewer pipes, electric and telephone wires from the service building to the different cottages. Each cottage consists of a large dayroom on the first floor and a dormitory with two single rooms in each end on the second floor. Toilet-rooms, bath-rooms and lavatories are conveniently located in each cottage; rooms specified have tiled floors, and up-to-date plumbing.

The staircase leading to the dormitory is of slate, at the head of which is a large dressing-room. On one side of the dressing-room is a lavatory, and on the other is a shower-bath and toilet-room, with a chute for soiled clothes. Between the dressing-room and dormitory there is a small alcove; this is the station of the night attendant. In it is placed the telephone, signal switches and electric switches, and from this point any patient and any door can be seen and help can be summoned any moment. At each end of the dormitory is a fire-proof staircase, leading directly to the ground outside the building, giving ample and direct exit from the buildings in case of fire at night. The cottages are all of the same size and construction with the exception of the middle cottage, or Cottage B, as it is called. In the dayroom of this cottage are the infirmary ward and the operating-room, the infirmary being partitioned from the balance of the dayroom. In the end of the infirmary ward is the operating-room, which is well lighted, has tiled floor and walls, instrument closet, wash-basin and sink conveniently placed. The cottages are well ventilated; the ventilation pipes all centering in a dome on the roof of each building, the domes adding beauty to the buildings. The buildings are constructed of red brick with white marble trimmings, and the finished floors are laid with maple. The service building is finished throughout with California redwood, stained to imitate mahogany; while the cottages are finished with Georgia pine. Each cottage has a spacious porch of colonial style; large, wide windows without bars or other protection, which give the group a distinctive appearance more like a summer hotel than a hospital for the insane.



BLOCK PLAN OF WOMEN'S GROUP.

The buildings are well lighted by electricity from a central plant. An interconnecting telephone system has been placed throughout the buildings, with a central station in the supervisor's office, where connection can be had with all the different offices on the place. A watchman's clock and time-detector has been placed in the supervisor's office with stations in the different cottages, cellars and first, second and third floors of service building. The water supply is from a stream of water running through the farm. It is pumped from the stream into a steel pressure tank, holding 165,000 gallons, and from there through a six-inch main, 8000 feet long, to the service building, whence separate pipes carry it to the several buildings. The sewer pipes from all the buildings verge into one main pipe, which is carried to a cesspool 500 yards from the building, whence it is siphoned out and distributed over fields (Waring system).

The buildings will accommodate two hundred patients without crowding and cost $760 per bed, including furniture and outfitting, heating, lighting, surgery, dispensary, telephones, etc. The control of the group is entirely in charge of women, subject to the authority of the superintendent and the Board of Managers. To appreciate the wisdom and humanity of this new plan, one has only to review the passionate protests of Dorothy Dix against the old custom of confining insane women in jails, almshouses and asylums, whose officers and attendants were almost without exception men. The employment of women as officers and attendants in institutions for the female insane removes embarrassing conditions and secures protection for the irresponsible, obtainable in no other way; exerts a refining and restraining influence upon patients by associating them with persons of the same sex; finally, one of the most potent considerations, is the elimination of all possibility of scandal.

The corps of officers at present consists of a resident physician, Dr. Louise D. Holmes, matron, supervisor of nurses, charge nurses, assistant nurses, stewardess, assistant stewardess, seamstress, housemaids, etc. In the housework, dining-room and kitchen work, a limited number of patients are employed.

Inasmuch as the *raison d'être* of any hospital is primarily the care and treatment of the sick, so in this everything is made subservient to the medical department. The physician-in-charge is head of the household. In addition to the medical care of the patients, officers and employees, she is the representative of the superintendent, governing the household and transacting the internal business affairs. She makes the rounds of the wards regularly twice a day, notes the mental and physical conditions of patients, and prescribes therefor.

The housekeeping is in charge of the matron. She has immediate charge of the servants and housemaids in the service building. In addition, she is in charge of the storeroom, and supplies of linen and clothing for nurses and patients.

The supervisor of nurses has immediate control of the cottages for patients, and is responsible for their good order and cleanliness, and

for the bedding, furniture and clothing belonging to them. The nurses and attendants are subject to her authority under the superintendent and medical officers.

During the day each cottage is under the special care of a "charge nurse," and all the other nurses on the ward are her assistants and under her directions. Her duties are confined to a single cottage, and she is responsible to the medical officers and supervisor of nurses. At 8.30 P. M. she and her assistants establish the patients comfortably in bed, and leave them to the care of the night nurse until 6 A. M., when they go on duty again.

Night nurses are required to guard especially against injury to those in their charge, and to report immediately to the proper medical officer cases of seeming illness, and in event of unusual excitement, violence or accident, to summon sufficient help to control the patient.

The dietary and culinary departments of the hospital are under the direction of the stewardess. She and her assistants attend not only to the preparation of meals for the general household, but fill orders for special bills-of-fare for the sick or those on special duty.

The affairs of the entire department are thus administered by women as briefly outlined, and while three months is perhaps too short a time to look for much result, yet enough has been accomplished to convince the most skeptical that the system is a step in the right direction.

MASSACHUSETTS.—*Danvers Insane Hospital, P. O. Hathorne.*—The electric-lighting plant of the hospital has been completed and is in operation. A detached laundry building is in process of construction.

—*McLean Hospital, Waverley.*—The tendency to increase in the number of admissions continues, while the capacity, 160 beds, is somewhat less than of the old hospital at Somerville. The admissions in 1899 were 135, showing an unusually rapid movement of the population on the basis of a daily average of 157. Both the daily average and rate of admissions are increasing this year. This shows also that the hospital is kept very full. The first admissions were 96, and the cases regarded as curable on admission were 82; and there were 37 recoveries. The practice continues of receiving patients here for first care who are later transferred to other hospitals. The demands for admission are in excess of the accommodations, and an additional building is needed for women. A remarkable feature of the work this hospital has done is the development of the voluntary system, under the provisions made 20 years ago by the laws of the Commonwealth. There were 61 voluntary cases admitted in 1899, only 8 less than one-half of all the admissions. This represents the usual proportion of such cases received in the new hospital at Waverley.

The chief contribution of the year 1899 to the means for improving the medical treatment was the bath-room in connection with the women's gymnasium. Both men and women have the daily use of these baths,

which are arranged upon the system of Dr. Baruch; nearly thirty patients receive this treatment every day. Its benefits are apparent in many ways, and it has already become an invaluable part of the therapeutic methods. The nurses receive instruction, as a part of their training, in the giving of baths, not only by means of the special apparatus, but in the various ways of using wet and dry packs, affusions, drip sheets, etc., available for private patients at their homes.

There has been no abatement in the usefulness of physical training as the means of treatment in the forms of medical and general gymnastics, and of out-door exercise in sports and games. The carving and wood-working classes, in the shops provided in the men's gymnasium, have spent many hours at this work under the direction of a teacher; they were occupied in this way every forenoon of five days in each week, for eight months last year. In the women's gymnasium the class in drawing has served the same purpose. The work of this class, which is conducted in the art room, has been greatly stimulated by the collections of fine pictures that have been loaned for periods of six months, or for much longer times in some cases, by their owners for exhibition here. This friendly interest continues to increase, and the patients and all who are concerned in their care gratefully appreciate the good fortune that brings to the hospital these pleasing and refining influences which contribute greatly to the healing of those suffering from mental illnesses. It is a proof of the remedial influences of the women's gymnasium, with its conservatory and billiard-room, and its increasing collection of paintings, photographs, casts and books, that it has become the practice to bring there every forenoon a number of the patients whose illnesses make it difficult to afford them the ordinary means of occupation and recreation.

In the clinical work careful studies of all the cases have been made and discussed in the regular conferences of the medical staff for the purpose of differentiating the symptom groups that constitute distinct forms of mental disease. The conditions being favorable for such inquiry among patients whose education enables them to lay their minds open to clinical questioning, encouraging progress has been made. As this work progresses there is a greater demand for collateral inquiry into the bodily conditions that accompany the various mental states, and the necessity for laboratory investigation in pathological chemistry has become more apparent. In this field of inquiry there is hope of finding indications for treatment. This progress is realizing the prevision with which this clinical-pathological laboratory was established in 1889; the aim has been from the first to study the pathology of insanity where it begins—in the living patient—with special attention to pathological physiology.

Studies in pathological chemistry have been carried on, to some extent, during the last ten years; and some papers have been published. The development of a special department for this work was provided for in the construction of laboratory rooms in

the new hospital. Now the consummation of a long-cherished purpose has been attained in the appointment of Dr. Otto Folin to conduct this part of the laboratory work. Dr. Folin graduated at the University of Minnesota with the degree of B. S. in 1892; he took the degree of Ph. D. at the University of Chicago in 1896 under Professors Nef and Stieglitz. He afterwards spent two years in European universities as a student of physiological chemistry, at Upsala, Berlin and Marburg, as a pupil of Hammarsten, Salkowski and Kossel. His subsequent studies have been especially directed to pathological chemistry, and during the last year he has had charge of the department of physiological and analytical chemistry in the University of West Virginia, where he also pursued some special investigations.

Two of the junior assistant physicians, whose service is for one year beginning September 1st, were reappointed—Harry W. Miller, M. D., for a third year in the laboratory department, and Guy G. Fernald, M. D., for a second year, in the clinical department, in which also Martin J. Cooley, M. D., was newly appointed for one year. Mr. Phil A. Shaffer, A. B., of the University of West Virginia, coming with Dr. Folin, will continue here some research work upon which he has been engaged.

The hospital has received a gift of $29,000 from a lady who has not disclosed her name, for the creation of a Samuel Eliot Memorial Chapel Fund. Dr. Eliot was a trustee of the hospital for thirty-two years, during the last twenty-four of which he was chairman of the board; such a building upon the grounds of the hospital will have a peculiar appropriateness as a memorial.

—*Boston Insane Hospital, New Dorchester.*—The electric-light plants have been installed and in operation since April. The laundry and diet kitchen are being equipped with electrical heating apparatus.

—*The State Asylum for Insane Criminals*, at Bridgewater, with one month remaining of the fiscal year, has 367 patients, an increase of 42 patients during the past year. 71 cases have been admitted and 35 discharged since October 1, 1899. 9 patients were admitted from the State Prison, 14 from the State Reformatory, 21 from the State Farm Prison Department; 2 were committed directly by the courts and the balance of the 71 cases so far admitted were from the different county houses of correction. Of the 71 cases admitted, 16 were arrested for crimes against the person, 27 for offenses against property, and the remaining 28 for vagrancy, drunkenness and minor offences. Of the 16 cases charged with crimes against the person, 1 was for murder, 3 for assault to kill, and one for assault with a dangerous weapon. Of the 35 cases discharged, 10 were apparently recovered, 5 improved and 13 died.

A new wing has been built during the year with four dayrooms and 140 single rooms, plus sanitaries, wash-rooms, etc. This addition will raise the normal capacity of the asylum to about 400 patients.

An increasing use of hydrotherapeutics has been made during the year. Two cabinets for hot-air baths have been constructed for use in connection with the shower-bathing apparatus.

A large percentage of the cases admitted to this asylum belong to the "dementing psychoses," that class of cases grouped by Kraepelin and others under the name of "dementia præcox" being largely represented. Quite a number of cases of paresis are yearly admitted, having been sentenced often while deeply demented for some petty crime characteristic of the general paretic. Four clear cases and two doubtful cases of paresis have been admitted this year.

—*The Massachusetts Hospital for Epileptics, Palmer.*—This institution was established by act of the Legislature, 1895, chapter 483. The old buildings of the State Primary School at Monson were given to the Board of Trustees, along with the large farm connected, and an appropriation of $160,000 was made for the construction of new buildings, the expenses attendant upon the removal of some of the old and the repair of the others. Later appropriations for maintenance and furnishing the buildings were made. Two brick hospital buildings were constructed, one for men and one for women, each to accommodate one hundred patients, and one administration building for officers and the residence of the officers. One former building was repaired so as to accommodate the employees of the institution other than the officers and attendants. Another building was also remodeled for the accommodation of twenty patients. This has been named Hyde Cottage, in memory of the late William S. Hyde, of Ware, a former trustee.

Upon the completion of these buildings they were immediately filled by transfers from other institutions. In 1898 an appropriation of $85,000 was granted for the construction of an infirmary building to accommodate one hundred patients, with the necessary officers and attendants, for a kitchen and dining-room building, for the accommodation of two hundred patients, a workshop, and a cottage for twenty women.

As a result of this act, the trustees have under way the following buildings: One infirmary proper, to care for twenty men and twenty women, with a dispensary, operating-room, laboratory, treatment-rooms, accommodations for a few nurses and the night attendants, and an assistant physician; two infirmary cottages, one for each sex, each to accommodate thirty patients, comprising at one end room for the violent and noisy and at the other end a dormitory for the aged and lame or bed-ridden cases not requiring the infirmary-proper treatment; a cottage for the accommodation of twenty women; a building having on the first floor a large dining-room and at the opposite end a commodious kitchen, while on the second floor there is a work-room covering the entire space, and finished to the roof with large skylights, which is also to be used for an assembly-room.

In 1899 an appropriation of $25,000 was allowed for an addition to the boiler plant, comprising a building and two boilers.

These new buildings are well under way and will be ready for occupancy within a year. The institution will then accommodate normally three hundred and forty; but without serious crowding, a considerably larger number can be taken, as the space provided is considered to be quite ample.

There has been leased a farm of one hundred and twenty acres, with a farmhouse. It is a plan to purchase this farm and to use the farmhouse when repaired for male patients, who work out of doors.

Very little can be said as to the result of the treatment in this institution as sufficient time has not elapsed to give a full test to the methods employed. The trustees, however, feel that a moderate degree of success has been attained and are pursuing the methods of individualizing cases and of industrial pursuits with a feeling that the outlook is promising.

As to the future plans of the institution, no positive declaration can be made. The water-supply is good and ample, and the sewerage system complete, while the other foundation elements of the institution are laid out on lines prepared to provide for whatever call may be made upon it. It seems probable that the institution will ultimately be called upon to care for not less than a thousand or twelve hundred patients. The method of doing this will be largely governed by the character of the inmates to be received. There is evidence of a call for colonizing, and with the land available, this is very likely to be finally arranged for. In that case, no doubt, small buildings would be erected in a village group and all arrangements for this portion of the institution made as home-like and informal as possible.

MINNESOTA.—*Minnesota School for Feeble-minded, Faribault.*—A new hospital with forty-one beds has been the principal addition for the year. It contains all modern equipments, including diet kitchens, complete forced ventilation, operating-room, psychological and neurological laboratories and Kny-Scheerer disinfecting apparatus for clothing.

There are one hundred and seventy-two epileptics in the institution, and a colony cottage for thirty adult males is being built on the institution farm. A cottage formerly used for hospital is being remodeled for a dormitory group for twelve epileptic boys.

NEW JERSEY.—Dr. John W. Ward writes: "I regret to have to write you that it seems to be the policy on the part of some counties of the State to take care of their own insane in county hospitals. This is being done more and more, until now we have not less than seven of these county institutions. Another one in Burlington county is approaching completion, and the subject is being agitated in several of the main counties. Cumberland county, in April last, removed about one hundred patients from this institution to their own county asylum, located near Bridgeton, the county-seat. After the experience in conducting the county institutions in the State of New York, one would think that the

adjoining States, at least, would hesitate in regard to taking steps toward their establishment, but from present appearance it seems as if experience was not a very good teacher.

—*Essex County Hospitals for the Insane, Newark.*—The graduating exercises of the thirteenth class of the Training School for Nurses were held on June 14, 1900, and six nurses received diplomas.

NEW YORK.—*Utica State Hospital, Utica.*—The staff as constituted at present consists of Dr. George H. Torney, Jr., First Assistant Physician; Dr. Edward G. Stout, Second Assistant Physician; Dr. Clarence J. Slocum, Assistant Physician; Dr. Clara Smith, Woman Physician; and Dr. Julius E. Haight, Medical Interne.

A system of rotation of nurses has been adopted whereby each nurse is required to serve a stated period on disturbed, semi-disturbed and quiet wards. This plan has been found quite satisfactory and benefits the nurse in two ways: After a period of service on a disturbed ward, where the strain of being constantly on the alert is considerable, and results ofttimes in a tendency to run down physically, the nurse is given opportunity to recuperate by transfer to a quiet and more congenial ward, where the class of patients is more tractable and where the extreme tension which obtains in a nurse on a disturbed ward is not required. Here the nurse remains and builds up her exhausted energies until the time arrives for another period of stress. Again the method is of use in connection with the training-school course, as it enables each nurse to gain a definite knowledge of the different forms of insanity and the manner in which each should be cared for.

In April last the farming property known as Graycroft, which had been leased for the previous three years, was purchased by the State. This act added to the hospital farming land about 160 acres. When first taken in hand the property was in a run-down condition and the buildings in a somewhat dilapidated state. Forty able-bodied patients and several attendants were domiciled in the old farmhouse and the work of rejuvenation and rehabilitation commenced. The house was repaired, a heating plant installed, and later a large dining-room addition built. The barns were re-arranged and new floors, stalls, etc., added. Old tumble-down fences were removed and new well-built wire fences substituted. Numerous fruit trees and about three acres of strawberries and raspberries were set out. The land was thoroughly cultivated and improved, so that at the time of purchase it had greatly increased in value and was a very desirable and productive addition to the hospital property. Recently a bath-house, 16 feet x 24 feet, with cement floor and spray baths, has been erected and a hot-water heater installed. It is proposed to light the colony with acetylene gas and thereby do away with the use of kerosene. The piping of the building is at the present time completed and a 50-light generator about to be installed.

—*Long Island House, Amityville.*—A small cottage has been erected in connection with this institution, 18 x 30 on the ground, one story high, containing a sitting-room, bed-room, bath-room and clothes-press, for the use of a single private patient.

COTTAGE AT LONG ISLAND HOUSE.

—*Hudson River State Hospital, Poughkeepsie.*—The administration building for the cottage department is rapidly approaching completion and will fill a long-felt want.

The cold-storage building will be ready for use by November 1.

The contract for the barns and coach-house has been let to Mr. Peter Keeler, of Albany, and they will probably be finished by the first of December.

A great deal of work has been done about the grounds in the way of grading and road-making, and all of the unsightly electric-light cables have been put in underground conduits.

The plan of isolating tuberculous patients in the distant cottages is being carried on with gratifying results.

—*Buffalo State Hospital, Buffalo.*—Mr. A. P. Bryant, representing Prof. Atwater, of Wesleyan University, Middletown, Conn., accompanied by Dr. Walter H. Kidder, of the Long Island State Hospital (until recently detailed on food-work and investigations for the State Hospitals), has been spending several days at the hospital for the purpose of starting

experiments relating to the physiological demands of the insane as regards food. Studies elsewhere made have shown the amount of consumption. The investigations here are for the purpose of determining what part of the food consumed is utilized in the body, and also to show the variations in body waste for the different classes of insane. The work is being carried on by Dr. Aldrich of the local staff, and will occupy some time.

Last year, in addition to the ordinary training-school instruction and lectures, a course of training in dietetics was given the graduates by Miss Caldwell, of Buffalo. The course extended over two months and occupied a portion of each day. One didactic lecture a week was given, to which every one who could be spared from duty, whether of the graduating class or not, was urged to attend. The remaining five days of the week were devoted to practical lessons in cooking, which were given to small classes consisting of six students each. The lectures were very well attended and proved to be useful and instructive to the nurses and of immediate and practical benefit in the preparation of food for the hospital and infirmary wards.

—*Matteawan and Dannemora State Insane Hospitals.*—The Matteawan State Hospital ranks second in point of age among the New York State institutions for the care of the insane, having been originally established at Auburn, N. Y., by an act of the Legislature in 1855. Previous to its organization, it was customary to commit to the State Asylum at Utica all convicted persons who became insane while undergoing imprisonment as well as all those who being charged with crime were found by the courts to be mentally deranged. The institution at Utica thus became a receptacle for a large number of insane convicts and of persons under criminal charges, who, for various reasons, were the cause of much anxiety to the management. Escapes were numerous, many feigners were discovered and the presence of convicts at the asylum became objectionable. The question, therefore, of separate accommodations for their care arose, and the Board of Prison Inspectors and Dr. John P. Gray, Superintendent of the Utica Asylum for the Insane, were appointed by the Governor as commissioners to visit all the prisons of the State in order to ascertain the probable number of insane convicts who would require asylum care.

Upon report of this commission to the Governor, the Legislature, by an act passed April 13, 1855, directed the Inspectors of State Prisons to make necessary provisions for the custody of this class of patients, and upon the completion of the contemplated institution, to cause the removal thereto, of all the insane convicts then at Utica, and thereafter to receive at such asylum all convicts who might become insane. No funds were available, however, for the carrying out of this act; but in 1857, $20,000 was appropriated to be expended upon grounds adjoining the State prison at Auburn. The original act shortly after was further modified so as to provide for convicts of the male sex only; the women to be

cared for as formerly, at Utica. A fine stone building was soon after erected from materials furnished by the demolition of some old structure at Auburn prison, and the work was carried on and completed largely by convict labor. Additional appropriations were subsequently made and finally, upon the completion of the edifice, it was formally opened on February 2, 1859, and for ten years it continued to receive and care for male convicts becoming insane in the various prisons of the State.

Utica and the other State hospitals which during this time had become established, although relieved of insane convicts, continued to receive unconvicted patients charged with crime, and gradually such cases accumulated at these hospitals to such an extent that in 1869 the law was modified, enlarging the scope of the State Asylum for Insane Convicts at Auburn. This act provided that judges might, in their discretion, commit to Auburn as well as to any other State asylum, persons accused of serious crimes, this statute also permitted transfers of similar cases to be made upon the order of a justice of the Supreme Court from any State hospital to the institution at Auburn. The name of the asylum was then changed from the State Asylum for Insane Convicts to the State Asylum for Insane Criminals.

This legislation led to a considerable increase in population and necessitated the enlargement of the buildings, and, in 1872, an additional wing was erected, which completed the old buildings at Auburn practically as they stand to-day.

In 1874, through efforts made by the superintendents of various State asylums, to obtain relief from criminal cases, the law was again changed so that persons charged with any degree of crime might be committed to the State Hospital at Auburn; and, in 1884, power was granted to justices of the Supreme Court, upon application of the medical superintendent of any State hospital, to transfer to Auburn any unsafe patient confined in such hospital who was under a criminal charge. These various legislative enactments led to a quickened growth in population, so that the institution outgrew the capacity of the buildings and it was found necessary to erect new structures in order to provide for the rapidly increasing population. The grounds at Auburn were limited in their extent, and, as the asylum was situated in the heart of the city, no additional land was available, consequently a commission was created by the Legislature, in 1886, for the purpose of selecting a new site. This commission consisted of the Comptroller of the State, the State Commission in Lunacy and the Medical Superintendent of the State Asylum for Insane Criminals. Nearly thirty different sites were visited by them and their search resulted in the final selection of Matteawan. Work was immediately commenced upon the new buildings, and in April, 1892, the overcrowded wards at Auburn were formally abandoned as a hospital for the insane, and the inmates removed to the new institution situated in Dutchess county overlooking the Hudson River at the entrance to the Highlands. At the time of the removal, the total population was about two hundred and sixty inmates, and it was supposed that the new build-

ings were sufficiently large to afford necessary accommodations for many years to come. The passage of the State Care Act, however, which prohibited the return to the county authorities of convicted patients remaining insane at the time of the expiration of their terms, with other causes, led to a continued increase in numbers; and it was soon found necessary again to seek additional room. The population at Matteawan at length reached a total of between seven and eight hundred inmates, consisting of unconvicted persons committed from the courts and convicted cases transferred to its custody from the prisons. In view of the rapidly enlarging numbers, it was thought best to separate the two classes; namely, the convicted and unconvicted; in other words, to erect in connection with the penal institutions of the State, a hospital for the care of convicted insane to which might be committed all inmates of such institutions becoming insane while undergoing sentence for a felony and in whose custody might be retained all inmates remaining insane at the time of the expiration of their sentence.

The Dannemora Hospital is supplementary to the State Hospital at Matteawan, and designed to receive the overflow population of the parent institution. The anticipated congestion of population at Matteawan has long been realized, and so energetically has been carried forward the work of constructing its annex in the Adirondacks that although barely three years have elapsed since the laying of its corner-stone on August 14, 1897, it is expected that early in the coming autumn the main building will be opened for the reception of inmates, thus affording much-needed relief to the older institution.

The only buildings which are now in course of construction, all of which are nearly completed, are the main building, the kitchen and bakery and the power-house.

The main building, whose superstructure is of gray granite from Dannemora Mountain, is in form of a rectangle, 300 feet long by 40 feet in width, with its two stories resting upon a high basement. Occupying the center of this immense building, and extending nearly its entire length, is a broad and lofty exercise hall, or dayroom, whose purposed utility is accurately described by its titles.

Joined to the eastern end of the main building is a huge kitchen, 60 feet long by 40 feet wide, and in the basement of the kitchen is the hospital bakery of the same dimensions.

Two hundred feet east of the main building and connected with it by a conduit is the building known as the power-house, which contains the boiler-room, the dynamo-room and the storage-bins for coal.

Dr. Robert B. Lamb, who is now Assistant Physician at the Matteawan Hospital, has been appointed Superintendent of the Dannemora institution, and will open it for the reception of inmates as soon as it can be made ready.

—*Craig Colony for Epileptics, Sonyea.*—The increase in the epileptic population of the Craig Colony between October, 1899, and October, 1900, was

234. The population of the colony October 1, 1900, was 612. Four new buildings on the Village Green, designed for 120 male patients, are now ready for occupancy and will be rapidly filled from the long waiting-list.

One of the greatest needs of the colony from its origin has been for suitable buildings in which disturbed and feeble-minded epileptic cases could be cared for. Ground was broken in August last for two such buildings; one on either side of the Kishaqua Creek—one for males, the other for females. Each will hold fifty patients and is built with a view to enlargement.

Dr. Spratling, superintendent of the colony, found that in the German Colony for Epileptics, 300 out of 1500; or 20 per cent of all the epileptics became within five years' time so feeble bodily or mentally, that they required infirmary care.

The superintendent of the colony is making strenuous efforts to keep the ratio of medical officers to patients 1 to 100. There are now 612 patients at the colony under the care of four paid and one unpaid medical officer. The addition of another medical officer at the colony will soon be made.

The State Comptroller and the President of the State Board of Charities were made a commission by the Legislature of 1899 to fix into grades, and to classify, the pay of all persons employed in the charitable institutions of the State other than the State hospitals for the insane. It now seems very probable that the medical officers at the colony will be graded in the same manner, and their pay fixed at the same amount, as pertains to similar positions in the State hospitals for the insane.

The training school for nurses, founded at the colony three years ago, graduated a class of six in June, 1900. The physicians at the colony find that the work of a trained nurse in aiding them to a better study of cases is a great help. Many of the nurses are sufficiently expert to describe in complete detail the muscular origin and order of progression of a seizure, naming each muscle as it in turn becomes involved.

An invitation was issued by the colony authorities to the members of the consulting board to have an annual meeting at the colony in June last. Nine consultants met with the managers at the colony on that day. They organized by electing Dr. Ely, of Rochester, president, and Dr. Putnam, of Buffalo, secretary; and decided to hold an annual meeting at the colony in June. Before adjourning they passed the following resolution:

"*Resolved*, That the Board of Consultants to the Craig Colony on the occasion of their first annual meeting take great pleasure in giving expression to their full sympathy with the plan and work of the institution, and place themselves on record, not only as regards its high standard, but also as expressing their surprise that so much has been accomplished in so brief a period."

The new schedule now being prepared in accordance with the law to grade the pay of medical officers in institutions will include a pathologist at the colony at a salary of $2500 per year, in addition to maintenance. The colony has a laboratory already completed and partially equipped for work.

Special appropriations to the amount of $159,100 will be asked for, for expenditure, during the year 1901. $100,000 of this will be for buildings for patients, and there will be two cottages constructed entirely of wood to provide for twenty patients each. It is proposed to locate these cottages, not on the Village Green, where the buildings are close together and where all should be of brick, but on the beautiful knolls that overlook the Kishaqua Creek gorge, and that lie picturesquely along the western boundary of the colony. Located on either of these sites, the buildings will have a fine setting of forest green about them, and will have a view of the horizon all the way round for a distance of nearly fifteen miles. The best class of patients will occupy these cottages. They will be fully equipped with fire appliances, and will be so constructed that they ought to stand at least a century.

The superintendent of the colony believes that such structures can be built, including plumbing, heating, lighting and ventilating, and ranges set in all kitchens for the sum of $200 per bed.

—*Marshall Sanitarium, Troy.*—The private asylum in Troy, N. Y., heretofore known as the Marshall Infirmary, is now licensed and operated under the official name of the Marshall Sanitarium. The hospital department is still maintained as the Marshall Infirmary, but has been removed to a separate building. The original institution is now entirely devoted to the care and treatment of private cases of insanity and drug and alcoholic addictions. During the past summer the buildings have been completely renovated and refurnished throughout, and the capacity has been increased from sixty to about one hundred. Plans for the grading and improvement of the grounds and other important changes are now under consideration. The sanitarium is an endowed one, and was founded by Benjamin Marshall in 1851. His object was to provide care and treatment "for the mentally and bodily sick" of Troy and vicinity at cost, "without dividends or profits to anybody." This policy remains practically unchanged.

The institution is under the direction of a board of governors, of which Mr. Geo. A. Wells is president, and Dr. R. H. Ward, secretary. The resident staff at the present consists of Hiram Elliott, M. D., physician-in-charge, and W. H. Everett, M. D., assistant.

North Dakota.—*North Dakota Hospital for the Insane, Jamestown.*—The Legislature will meet next winter. The women's division of the institution is excessively crowded, but poor crops have been almost everywhere prevalent, and the prospect of further building extension is not especially favorable. The men have comparative room now; and the small congregate dining-rooms, at which about 225 patients now eat, are satisfactory. The number of male patients at this date is 219, women 189, total 408.

Ohio.—*Cleveland State Hospital, Cleveland.*—After an experience with smallpox during the last three months, there is now under construction a

small building to be used as a detention hospital, where all new patients will be received and kept for thirty days, thereby obviating the risk of exposure to contagious diseases of the patients in the wards of the main building and the congregate dining-room. It has a capacity of about 60.

—*Massillon State Hospital, Massillon.*—A considerable amount of new construction has been carried on during the summer months. About 1000 feet of tunneling has been built, connecting the new cottages with the boiler-house. Work on the new Assembly Hall is progressing. The building will be known as Assembly Hall and Employes' Quarters. The auditorium will be in the center. There will be 4300 square feet of floor-space, and a gallery with a seating capacity of about 400. The seating capacity of the entire auditorium will be between 1000 and 1100. The ends of the building will be used for employees' quarters; in all, 36 bedrooms. The basement will be used for drug-room, laboratory, gymnasium and amusement-rooms, such as bowling, billiards, etc. The building will be three stories high, with basement, and cost in the neighborhood of $60,000.

A rose-house, 48 x 18 feet, has also been constructed.

—*Longview Hospital, Carthage.*—Plans and specifications for the new building for male patients were approved by the board, and work on the same commenced in the early spring. Owing to delay experienced in securing some of the large iron girders, progress has been slow, but the building will be enclosed before cold weather. The lower floors will be devoted to the treatment of acute forms of insanity. The interior arrangements will permit of strict classification of patients, both in day and night quarters, the latter being entirely shut off so as to allow thorough ventilation during the day. There will be single sleeping rooms and dormitories for those who require the services of night attendants. A hospital ward will provide for the sick and those who require surgical attention. The building will have its own kitchen, dining-rooms and heating plant. The proximity of the dining-rooms and kitchen will insure the serving of hot meals, and such food between times as is frequently required for this class of patients. The basement will contain Turkish baths, needle and spray baths, showers, douches, etc. For winter amusements, bowling, billiards, card and smoking-rooms will be provided.

It is the intention to furnish and equip this building with every convenience and appliance which will prove of service in the treatment of curable forms of insanity.

PENNSYLVANIA.—*The Easton Sanitarium, Easton.*—This private institution has been placed in charge of Dr. C. Spencer Kinney, formerly First Assistant Physician at the State Homœopathic Hospital at Middletown, N. Y. Dr. Selden H. Talcott will serve as consulting physician.

COTTAGE FOR ACUTE INSANE, LONGVIEW HOSPITAL,
CARTHAGE, OHIO.

Building fireproof. Partitions of steel and cement, three inches thick. Ceilings of steel. Bases everywhere of gray marble; window sills, wainscot in washrooms, etc., of same material. All floors, except in sitting and bed-rooms, tiled. Lavatories, bath-tubs, hoppers, etc., are Mott's "Imperial Porcelain." Building heated with hot water.

The upper story will be occupied by chronic dormitory patients.

RHODE ISLAND.—*Butler Hospital, Providence.*—Mrs. W. G. Weld's memorial building, the Weld House, of which mention has already been made in this department, is now covered. It consists of a building for disturbed patients, comprising suites and single rooms, and an octagonal infirmary for bed-ridden men of the demented class, the two structures being connected to the main men's wing by means of corridors, which latter will be available as solaria and dayrooms. It is expected that this addition will be ready for occupancy by next autumn. Mrs. Weld has lately added $10,000 to her original munificent gift of $75,000.

By the will of the late Mr. John Nicholas Brown, a trustee, the hospital receives $50,000.

A feature of the summer's entertainment has been the provision, at the private expense of the trustees, of a number of band concerts on the lawn.

A fine oil portrait of the late Thomas Poynton Ives Goddard has been presented to the hospital and placed in the house that bears his name.

—*State Hospital for the Insane, Howard.*—A new cottage for the Hospital for the Insane has been partly constructed after plans prepared in 1898 and afterwards somewhat enlarged and improved, the General Assembly having made appropriation therefor in September, 1899. The building is for a class of patients who, not needing restraint, can be safely allowed to work under attendants outside of the hospital fences, and do not have to be kept in rooms with guarded windows. It measures 25 by 90 feet and has two stories.

The first story is of brick, built with a fourteen-inch hollow wall, and contains a resting or recreation-room, 14 by 46 feet; a dining-room, 23 by 33 feet, with conveniences for serving meals and washing dishes; a douche-bathing room, 8 feet 6 inches by 21 feet; two water-closet rooms, one for inmates and one for officers, with a bath-tub in each; and a storeroom for clothing and one for bedding.

The second story is of wood, 12 feet 8 inches in height, and contains a dormitory, 24 by 70 feet, with a suitable number of water-closets to accommodate thirty men; a room for two attendants, 8 feet 8 inches by 19 feet; and a room 8 feet 8 inches by 10 feet, for the clothing of the men at night. The location is at a distance of 100 feet from the nearest building (No. 12x, so called), from which steam is conducted underground for heating, and 400 feet from the new barn, in which, as well as on the land of the hospital, the occupants will be employed. It is not intended to enclose this building with fences.

At the close of the year the building had been completed externally and plastered. The interior finish, plumbing and heating are yet to be done. The adding of ten feet to the original length of the building and some additional conveniences, together with the increase of cost of materials since the estimate of cost was first made, will carry the expenditure of constructing this building beyond the original estimate and possibly may make necessary an additional appropriation for completing it.

VIRGINIA.—*Central State Hospital, Petersburg.*—A brick building, center three stories and wings each two stories high, constructed mainly on the dormitory and dayroom plan—there being twenty single rooms for patients and fifteen for attendants—is nearing completion. The basement is to be concreted and used for a congregate dining-room. The capacity of the building will be 165 patients and fifteen attendants. Male epileptics will occupy the lower or first floor and chronic quiet cases the second floor. Attendants will occupy the third floor exclusively. Not the least desirable features about the new building are ample porches and covered way connecting with the old building. Upon the completion of this building—about December—there will be accommodations here for all the colored insane in the State. There are now 870 patients in the hospital and 150 in the jails, or with friends under bond.

The new law regulating commitment and detention of the insane—already reported in the JOURNAL—is working satisfactorily.

The Legislature last winter passed the following law: "The presidents of the respective boards, and the superintendents of the respective hospitals, shall meet annually at one or other of the hospitals, for the purpose of systematizing the methods of keeping accounts, books and records, making reports, statistical tables, and otherwise harmonizing, as far as practicable, the hospitals of the State in regard to their management." The first meeting was held at the Southwestern Hospital, August 15, with a full representation from all the hospitals except the Eastern, at Williamsburg. Judge D. W. Bolen, president of the board of directors of the Southwestern Hospital, was elected chairman, and Dr. W. F. Drewry, superintendent of the Central Hospital, was elected secretary. At this meeting several moves in the right direction were taken, which will unquestionably bear fruit in due season.

After the meeting of the presidents and superintendents had adjourned, a "State Association of Charities and Correction" was organized, with the following officers: President, Judge J. L. Tredway; Vice-President, Mr. Robert Gilliam; Secretary and Treasurer, Dr. Wm. F. Drewry.

WISCONSIN.—*Milwaukee Hospital for Insane, Wauwatosa.*—The new residence for the superintendent, south of the hospital building and near the highway, which has been in process of construction since last May, is rapidly approaching completion. The site is very picturesque, being on a high knoll and in a dense grove of trees, affording a charming view of the surrounding country. The house, consisting of sixteen rooms, is constructed of St. Louis brick, with capacious porches, balcony and lookout deck, and the interior arrangement is thoroughly modern and up to date, including a complete electrical outfit in the way of lighting, telephones, bells, etc. The heating is by means of hot water, supplied from the hospital plant and pumped back. Light is also supplied from the institution plant. All of the laboring work on the house was furnished by the patients and the mechanical part largely by hospital employees, assisted by patients skilled in the various trades. The re-

moval of the superintendent's family from the hospital building will increase its capacity for patients to the number of one hundred and thirty approximately, making the total capacity of the hospital about six hundred and fifty. The third and fourth floors of the administration building will be devoted to patients, on the dormitory plan, the officers being then installed in the present quarters of the superintendent on the second floor.

A dining-room for the laboring class of men patients is being established at present writing. The room was formerly used as a vestibule to the old drying-room and is about forty by fifteen by eighteen feet high. It is admirably adapted to the requirements, inasmuch as it adjoins and connects with the smoking-room. Under the new arrangement the laboring men can then leave their ward in the morning and not return until bed-time; spending the noon hour in the smoking-room, which is liberally supplied with cushioned couches, and thus approximating as closely as possible conditions as they exist outside of a hospital.

Since the extension of the electric railway to our gates, the patients have been afforded much pleasure by trolley rides to neighboring resorts.

—*The Oakwood Retreat, Lake Geneva.*—Dr. William E. Dold, formerly assistant physician and acting superintendent of the Bloomingdale Asylum, New York City, has taken charge of this private hospital.

Appointments, Resignations, Etc.

ACHESON, DR. JOHN, appointed Medical Interne at the Hudson River State Hospital, Poughkeepsie, N. Y.

ACKEBAUR, ——, appointed Second Assistant Physician at the State Lunatic Asylum, Little Rock, Ark.

ADAMS, DR. H. C., formerly of the Kankakee Hospital for the Insane, appointed Second Assistant Physician at the Iowa Hospital for the Insane, Mt. Pleasant, Iowa.

ANDREWS, DR. ROBERT M., appointed Medical Interne at the Willard State Hospital, Willard, N. Y.

BALDWIN, DR. LOUIS B., appointed First Assistant Physician at the North Dakota Hospital for the Insane, Jamestown, N. D.

BARNES, DR. H. L., promoted to be Assistant Physician at the Danvers Insane Hospital, Hathorne, Mass.

BASSOE, DR. PETER, resigned as Second Assistant Physician at the Iowa Hospital for the Insane, Mt. Pleasant, Iowa.

BELL, DR. R. W., appointed First Assistant Physician at the Asylum for the Insane, Toronto, Canada.

BRANCH, DR. EDWARD C., resigned as First Assistant Physician at the North Dakota Hospital for the Insane, Jamestown, N. D.

BRUCK, DR. CARL, resigned as First Assistant Physician at the Milwaukee Hospital for Insane, Wauwautosa, Wis.

BUSWELL, DR. C. A., appointed Assistant Physician at the Illinois Northern Hospital for the Insane, Elgin, Ill.

CAMPBELL, DR. ARCHIBALD, formerly First Assistant Physician at the Manhattan State Hospital, New York City, appointed Associate Physician at "Falkirk," Central Valley, N. Y.

CLARK, DR. FREDERICK T., resigned as Assistant Physician at the Hudson River State Hospital, Poughkeepsie, N. Y.

COOPERNAIL, DR. GEORGE P., appointed Assistant Physician at the Long Island Home, Amityville, N. Y.

CRENSHAW, DR. J. C., resigned as First Assistant Physician at the State Lunatic Asylum, Little Rock, Ark.

CRITTENDEN, DR. S. W., appointed Assistant Physician at the Boston Insane Hospital, Boston, Mass.

CUNNINGHAM, DR. S. L., appointed Assistant Physician at the Northern Indiana Hospital for the Insane, Logansport, Ind.

DENSON, DR. E. G., appointed Assistant Physician at the East Mississippi Insane Hospital, Meridian, Miss.

DEVLIN, DR. JAMES L., appointed Medical Interne at the Manhattan State Hospital, New York City.

DOBSON, DR. T. L., resigned as Assistant Physician at the East Mississippi Insane Hospital, Meridian, Miss.

ELLIOTT, DR. HIRAM, appointed Physician in Charge of the Marshall Sanitarium, Troy, N. Y.

ELLIOTT, DR. JOHN G., promoted to be Assistant Physician and transferred from the Manhattan State Hospital, New York City, to the Hudson River State Hospital, Poughkeepsie, N. Y.

EVERETT, DR. W. H., appointed Assistant Physician at the Marshall Sanitarium, Troy, N. Y.

FOOTE, DR. L. F., resigned as Assistant Physician at the Illinois Northern Hospital for the Insane, Elgin, Ill.

FOWLE, DR. F. F., appointed Second Assistant Physician at the Milwaukee Hospital for Insane, Wauwatosa, Wis.

HALLIGAN, DR. J. H., resigned as Third Assistant Physician at the Central State Hospital, Petersburg, Va.

HARLEY, DR. MARY, resigned as Medical Interne at the Hudson River State Hospital, Poughkeepsie, N. Y.

HINDLEY, DR. M. L., appointed Assistant Physician at the Massillon State Hospital, Massillon, Ohio.

HUME, DR. B. L., appointed Third Assistant Physician as Pharmacist at the Central State Hospital, Petersburg, Va.

HUXLEY, DR. FRED., appointed Second Assistant Physician at the Minnesota School for the Feeble-Minded, Faribault, Minn.

JOHNSON, DR. KATHARINE B., appointed Assistant Physician at the Northern Indiana Hospital for the Insane, Logansport, Ind.

KAHN, DR. CHARLES, resigned as Assistant Physician at the Illinois Northern Hospital for the Insane, Elgin, Ill.

LAMB, DR. ROBERT B., formerly First Assistant Physician at the Matteawan State Hospital, Matteawan, N. Y.; appointed Medical Superintendent of the Dannemora State Hospital for Insane Convicts, Dannemora, N. Y.

MCMAHON, DR. JOHN J., resigned as Assistant Physician at the Long Island Home, Amityville, N. Y.

MELLEN, DR. SAMUEL F., Assistant Physician, transferred from the Long Island State Hospital, King's Park, N. Y., to the Hudson River State Hospital, Poughkeepsie, N. Y.

METCALF, DR. RAYMOND F., appointed Medical Interne at the Hudson River State Hospital, Poughkeepsie, N. Y.

MILLIGAN, DR. J. W., resigned as Senior Physician at the Northern Indiana Hospital for the Insane, Logansport, Ind.

MOODY, DR. G. H., formerly Second Assistant Superintendent, promoted to be First Assistant Superintendent of the Southwestern Insane Asylum, San Antonio, Texas.

MOSES, DR. KATHARINE B., appointed Assistant Physician at the Cleveland State Hospital, Cleveland, Ohio.

NAIRN, DR. B. ROSS, promoted to be Junior Assistant Physician, and transferred from the Buffalo State Hospital, Buffalo, N. Y., to the Long Island State Hospital, King's Park, N. Y.

PACKER, DR. FLAVIUS, First Assistant Physician, transferred from the Long Island State Hospital, King's Park, N. Y., to the Matteawan State Hospital, Matteawan, N. Y.

PARKER, DR. EDWARD L., promoted to be Junior Assistant Physician at the Long Island State Hospital, Flatbush, N. Y.

ROBERTS, DR. HENRY A., resigned as Assistant Physician at the Boston Insane Hospital, Boston, Mass.

ROBINSON, DR. ——, resigned as Assistant Medical Superintendent of the Asylum for the Insane, Toronto, Canada.

ROSS, DR. F. A., resigned as Assistant Physician at the Danvers Insane Hospital, Hathorne, Mass.

ROSS, DR. W. K., appointed Assistant Medical Superintendent at the Asylum for the Insane, Toronto, Canada.

SELLERS, DR. R. B., appointed Second Assistant Superintendent at the Southwestern Insane Asylum, San Antonio, Texas.

SISSON, CHARLES E., formerly Assistant Physician at the Wisconsin Hospital for the Insane, Mendota, Wis., appointed Assistant Physician at the Illinois Hospital for the Insane, Elgin, Ill.

SLOCUM, DR. CLARENCE J., promoted to be Assistant Physician, and transferred from the Hudson River State Hospital, at Poughkeepsie, to the Utica State Hospital, Utica, N. Y.

SPORK, DR. B. F., promoted to be First Assistant Physician at the Milwaukee Hospital for Insane, Wauwatosa, Wis.

STACKHOUSE, DR. O. C., resigned as Medical Interne at the Hudson River State Hospital, Poughkeepsie, N. Y.

STAFFORD, DR. ——, resigned as First Assistant Physician at the Asylum for the Insane, Toronto, Canada.

STRANAHAN, DR. J. O., resigned as Assistant Physician, at the Hudson River State Hospital, Poughkeepsie, N. Y.

STREAKER, DR. L. H., appointed Assistant Physician at the Northern Indiana Hospital for the Insane, Logansport, Ind.

TIERNEY, DR. J. S., appointed Assistant Physician at the Cleveland State Hospital, Cleveland, Ohio.

TROXELL, DR. ALLEN, appointed Medical Interne at the State Asylum for Insane Criminals, Bridgewater, Mass.

TURNER, DR. JOHN S., formerly Assistant Superintendent, Southwestern Insane Asylum, San Antonio, Texas, promoted to the Superintendency of the North Texas Hospital for the Insane, Terrell, Texas.

WALDO, DR. LOUIS T., promoted to be Assistant Physician and transferred from the Willard State Hospital, Willard, N. Y., to the Hudson River State Hospital, Poughkeepsie, N. Y.

WHEELER, DR. LUCY, resigned as Second Assistant Physician at the Minnesota School for the Feeble-Minded, Faribault, Minn.

WHITE, DR. R. L., promoted to be First Assistant Physician at the State Lunatic Asylum, Little Rock, Ark.

WILSON, DR. J. T., resigned as Superintendent of the North Texas Hospital for the Insane, Terrell, Texas.